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Clinical Lectures.

ARTICLE I.

TYPHOID FEVER: ITS UNUSUAL PREVALENCE IN THE CITY OF CHICAGO DURING THE SUMMER AND AUTUMN OF 1881; ITS CAUSES, CHARACTERISTICS AND TREATMENT. The substance of a Clinic in the Medical Wards of the Mercy Hospital, Jan. 20, 1882. By N. S. DAVIS, M.D., Professor of Principles and Practice of Medicine and of Clinical Medicine in Chicago Medical College.

GENTLEMEN: At the opening of the present college term the last week in September, you found an unusual number of cases of severe typhoid fever in the medical wards of this hospital, and your attention was occupied during almost every medical clinic-day in a bed-side study of cases of that important variety of fever for five or six weeks. I then had occasion to remark to you that the disease had been much more prevalent in this city during the summer and early autumn than the average of a term of years, and that the progress of individual cases was characterized by unusual severity. During the last month (December)

you have seen the number of cases steadily diminish in our wards until there are but few left, while their places have come to be occupied by a larger proportion of rheumatic, catarrhal, and pulmonary affections. Among the number left, is one, in the progress of which there are some points of interest to which I wish to direct your attention at the present time. Before I do so, however, I wish to present some facts that may explain, in part at least, the unusual prevalence of typhoid fever the past season. To assure myself of the correctness of my impression as to the extraordinary prevalence of the disease, I took the time to compare the official reports of mortality by the Health Department of the city for the nine months commencing April 1 and ending December 31, of 1880, with the same months of 1881. That you may appreciate the comparison better I will place it in tabular form before you on the blackboard, as follows:

Number of Deaths from Typhoid Fever in—	1880.	1881.
April	11	10
May	8	29
June	9	24
July	11	23
August	21	98
September	25	94
October	31	123
November	14	73
December	13	53
Total	143	527

You see by the figures that the total number of deaths from typhoid fever for the nine months of 1880 was 143, and the total number for the same months of 1881 was 527, being an increase of nearly four-fold. If we might suppose the mortality from this disease in 1880 was a little below the ordinary average, there would still remain sufficient increase to justify the appellation of epidemic for the disease in 1881. One of the most interesting and important questions suggested by the unusual prevalence of typhoid fever during the past season relates to the cause or causes that may have produced it. I presume no one will claim that there has been any fresh importation of fever germs or poison

from abroad; neither can it be truthfully claimed that the sanitary condition of the city, so far as the accumulations of dirt and filth in the streets and alleys, and the conditions of sewers, etc., are concerned, was in any material degree worse in 1881 than in the preceding year. If this is conceded, then we must examine the meteorological characteristics of the two seasons to see if they afford any reasonable explanation.

In comparing the mean temperature of the nine months, I find that of 1880 to be 55.4° F., and that of 1881 to be 58.3° F. The mean for the months of April, May and June, 1880, was much higher than for the same months in 1881. The means for July and August were very nearly the same in both years, while the mean for each of the remaining four months was much higher in 1881 than in 1880. You see, therefore, that the higher aggregate mean temperature for the nine months of 1881 is owing entirely to the higher temperature of the last four months. But the figures in the table show that the unusual prevalence of fever commenced in May, when the mean temperature of that month was nearly 4° F. below that of the corresponding month of the preceding year; consequently we get no explanation from this comparison of mean temperatures. A comparison of the mean humidity and average rain-fall affords no more satisfactory results. And yet a more detailed study of the meteorological conditions accompanying the two years develops differences of a striking and important character. For instance, in the months of February and March of 1880, there was no unusual fall of either snow or rain, and April commenced with about the usual temperature and soil moisture, and throughout that and the succeeding month there were frequent rains, making the aggregate of fresh fallen water a full average for both months. The same was true in regard to the temperature and rain-fall for the next five months, from the first of June to the end of October. There was no protracted season of dry weather until November and December, when the temperature had become low. On the other hand, during the months of February and March, 1881, there was an extraordinary fall of snow, more especially during the last half of March. The snow fell in this region several feet deep. Its melting caused the month of April to be character-

ized by extraordinary floods over nearly the whole Northwest, and the soil was saturated to an unusual depth. Yet directly following the overwhelming saturation from the melting snows of March there were sixty-seven days during which there was hardly enough rain-fall to wet the dust in the streets. The first rain-fall of importance after the beginning of April was on the 6th, 7th and 8th of June. Then followed forty-two days more, until the 21st of July, without rain sufficient to penetrate the soil an inch at any one time. A liberal rain fell on the 21st of July, but no more of importance until the 15th of September, a period of fifty-four days. We thus find five and a half months of dry weather, broken by only two copious rains, and these separated by an interval of forty-two days, following a period of most complete saturation, and the last half of the time accompanied by a temperature favorable for both decomposition and evaporation of the morbid products. Another coincident item of much importance was the greater *stillness* of the atmosphere during all the months under consideration in 1881, compared with those of 1880.. The aggregate number of miles travelled by the winds or atmospheric currents, at the government signal service station in this city, for the nine months of 1881 was 50,422; and for the same months of 1880 it was 56,779.

Not only was the aggregate distance traveled by the atmospheric currents much less in 1881, but the maximum velocity attained by the winds was from four to fifteen miles per hour less for each month, except September, which was four miles per hour more than in the corresponding month of 1880. By this study of the meteorological records, I have evolved three factors, or special characteristics, of much importance in their relations to the prevalence of typhoid fever. They are, first, the extreme saturation of the soil from melting snow during the first half of April; second, the long periods of dryness during the succeeding five months favoring the constant evaporation of the products of decomposition from the surface and sub-soil into the atmosphere; and third, the constant stillness of the atmosphere, which greatly favored the retention of the evaporated miasms in the lower strata, where they would be most readily inhaled by the community. That these coincident conditions were the chief

agencies in causing the unusual prevalence and severity of typhoid fever during the past season, I have no doubt. This conclusion is further supported by the fact that there was, during the same time, a greater development of that form of malaria which produces periodical fevers, as shown by the marked increase in the mixed cases, called typho-malarial. Thus we have for nine months 65 deaths reported as from typho-malarial fever in 1881, and only 17 for the same period in 1880. Then a careful noting of the several data will show that the conditions which I have pointed out as efficiently favoring the prevalence of the fever, existed in their greatest intensity from the 21st of July to the middle of September, and if you remember that most of the deaths resulting from the typhoid form of fever occur during the fourth and fifth weeks after their commencement, you will see why the highest mortality was reached in October, and why the more copious rains, and greater prevalence of north and north-east winds in October, so rapidly diminished the number of attacks as to cause a great decline in the mortality for the following month of November. During the earlier part of the present college term, while calling your attention to the symptoms and treatment of several cases of typhoid fever in these wards, I stated that fever when used as the name of an acute general disease was something more than mere increased heat; that the latter was, indeed, only one of a number of important symptoms, resulting from a disturbance of the elementary properties of the tissues and of the molecular movements generally; and, consequently, that the prevailing antipyretic doctrine and practice were founded upon a mere symptom common to many diseases, instead of resting upon the actual pathological processes which constitute a distinct variety of fever.

As proof of the correctness of this view, I directed your attention to the fact, fully demonstrated by clinical experience, that the heat returned just as often as the influence of the antipyretic was withheld, until the disease had run its natural course. The correctness of these views has received striking confirmation by the facts embraced in a "Clinical Lecture on the Antipyretic Treatment of Typhoid Fever by Baths, Sponging the Body, and the Wet Sheet," in the Bellevue Hospital, by Austin Flint, M.D., etc., and

published in a recent number of the *Philadelphia Medical News*. In this lecture Dr. Flint gives an interesting analysis of the treatment of seventeen cases in the wards of the hospital under his own direction during the present season, detailed records of which were kept by his assistants. The treatment consisted mainly in the employment of antipyretics, including the cold bath, wet sheet with sprinkling, and the sponge bath; and in a less degree, sulphate of quinia and alcoholic liquids. Among the conclusions arrived at by the lecturer are, first, that by the employment of the external application of cold water in typhoid fever the temperature of the body can be reduced to 102° F. or lower. Second, that after a variable period of time the temperature, "as a rule, again rises as high as, or higher than, before the reduction." Third, that the cases analyzed "do not afford proof either that the fatality of typhoid fever or its duration is diminished" by the antipyretic measures employed. Of the seventeen cases mentioned as treated by the measures alluded to, four died.

While appreciating fully the value of frequent sponging of the cutaneous surface with water, whenever it is hot and dry, as a palliative in typhoid fever, I have found it to exert but a feeble influence over the progress of those general deteriorative molecular changes throughout both the organized structures and the organic constituents of the blood, which constitute the essential pathology of this variety of fever. To more effectually counteract these morbid changes we need some remedy capable of exerting a general alterant and antiseptic influence, and maintaining it for a considerable time without depressing the strength, or creating local complications. The last time I took you to the bedside of typhoid fever patients I called your attention to the effects of iodine, which I had then commenced giving, with the hope that it might be found capable of exerting more nearly the actual alterant and antiseptic influence needed, than any of the remedies hitherto used in such cases. Since then I have continued to use the remedy in all the well marked cases of typhoid coming under my supervision, both in the hospital and in private practice. Without counting the case before us to-day, which is yet under treatment, the whole number of well marked cases in which the

iodine was given as the leading remedy, is fourteen. Seven of these cases occurred in private practice, and the other seven were treated in these wards. Of the seven cases treated outside of the hospital, five came under my care during the first three days after the patients took to their beds; the other two not until the first half of the second week. Of those treated in the hospital, two were admitted on the third day of the fever, two on the fifth and sixth days, and the remaining three between the seventh and tenth after the commencement of the disease. You will note that nine of the fourteen cases were brought under treatment during the first week after the onset of the disease, and the other five not until the first half of the second week. The treatment in all these cases consisted in the administration of from 12 to 15 minims of the following solution of iodine:

℞ Iodinii .....0.5 grams .....grs. viij
Potassii iodidi ..... 2.0 grams..... " xxx
Aquæ distillatæ .....45.0 cc.....℥jss
M.

These doses were generally diluted with 30 cc. or two tablespoonfuls of sweetened water, and repeated every four hours for the first three or four days, and then every six hours until indications of convalescence appeared. Whenever the intestinal evacuations become too frequent and thin, a teaspoonful of the ordinary turpentine and laudanum emulsion was given between the doses of iodine. When the temperature rose to 40° C. (104° F.), and the skin dry, the patients were frequently sponged with cold water. Two of the seven treated in private practice took two grains of sulphate of quinia three times a day during the last week of their progress. Nearly all of the seven treated in the hospital wards took small quantities of the mineral acids largely diluted with water during the earlier part of their treatment, and small doses of quinine three or four times in the twenty-four hours during the latter part. All the fourteen were carefully nourished by the faithful giving of milk, wheat-flour and milk-gruel, and beef-tea, at regular intervals.

No alcoholic liquids, either fermented or distilled, were given to any of these patients during any part of their treatment. Of

the nine cases in which the treatment was commenced during the first week after the patients took to their beds, four convalesced between the twelfth and fourteenth days; three between the fourteenth and seventeenth, and two between the seventeenth and nineteenth. Of the five cases in which the treatment was not commenced until the first half of the second week of their progress, three convalesced between the eighteenth and twenty-first days, and the other two between the twenty-first and the twenty-fifth. No one of the fourteen suffered a relapse, and no case terminated fatally. I now call your attention to the fifteenth case, in room 11, which was admitted into the hospital on the 3d of December, presenting all the symptoms of a severe grade of typhoid fever, which had commenced three days before his admission. He was put directly on the use of the solution of iodine, alternated with the turpentine and laudanum emulsion, to control a loose and tympanitic state of his bowels, with milk, and milk and flour gruel for nourishment. The case progressed favorably, and convalescence was established in about twenty days from the commencement of the disease, or seventeen days from the beginning of his treatment. This convalescence proceeded until he was able to be up, dressed, and about the house, with a good appetite and natural state of his evacuations. Nearly two weeks from the commencement of his convalescence, he began again to complain of the premonitory symptoms of fever, and on the third day had so distinct a chill that it was thought he might be under the influence of malaria, and he took three decigrams (grs. v) of quinine three times a day for two or three days. The fever, however, again assumed an unmistakable typhoid character, with considerable delirium and some looseness of the bowels. The original treatment with iodine and the emulsion was resumed, and has been continued to the present time. His temperature has declined below 38° C. (99° F.), in the morning, and 38.3° C. (101° F.), in the evening, with a clean, moist tongue, and other indications of approaching convalescence. I learn that this patient has formerly been affected with insanity, and his brain and nervous structures may have been somewhat enfeebled. But of the final results of his present sickness you will be informed in due time.

During the last four days three new cases of typhoid fever have been admitted into my wards, and all placed under the treatment I have been detailing. You can now examine them in their respective beds, and note their progress at subsequent clinic hours. To prevent being misunderstood, I will add, that I am not using iodine as a *specific* curative agent in typhoid fever, but simply as a general alterant and antiseptic, adapted to fulfill certain rational indications afforded by the pathology of the disease, and always to be aided by such collateral remedies as the abdominal or other local symptoms may indicate.

From my present experience, I am led to think it is a remedy of great value, especially when its use is commenced in the forming stage, or during the first week after the confinement of the patient from the development of the fever.

BORACIC ACID AS AN ANTISEPTIC IN CERTAIN SKIN AFFECTIONS.—Boracic acid being odorless and non-irritating, forms a convenient remedy in certain skin affections. By wearing stockings and cork soles saturated with boracic acid, the offensive odor from the feet is at once annihilated. Excessive perspiration of the same has also been permanently cured by boracic acid. An ointment of this is valuable in ulcerations, and should be expressly prepared in this manner: Make a solution of boracic acid in glycerine, and incorporate with a fatty basis of white wax and almond oil. It resembles cold cream. Vaseline is objectionable. Boracic acid is valuable in scrofulous ulcerations, abrasions, excoriations, etc.—(Extract from an article in *The Practitioner*, by G. Thin, M.D.)

Original Communications.

ARTICLE II.

A NEW THEORY OF GENERATION. By H. D. VALIN, M.D., Member of the Philosophical Society of Chicago, etc. (Read before the Biological Society, Jan. 4, 1882.)

"Hippocrates maintains that each of the two sexes possesses two kinds of seeds, formed by the superfluous nutriment, and by fluids constituted of materials proceeding from all parts of the body, and especially from the most essential—the nervous. Of these two seeds, the stronger begets males, the weaker females."*

Buffon supposed organic molecules to be incorruptible primordial monads. After an individual had acquired its full size, organic molecules would be produced in excess in each organ, and they would be sent from it, invested with its shape, to the genital organs.

Darwin declares that every separate part of the whole organization reproduces itself, and that spermatozoa include and consist of a multitude of germs thrown off from each separate part or unit.

All these theories contain certain elements of truth.

Herbert Spencer, in building up the Monistic System of Philosophy, gave the first adequate explanation of generation. "Setting out with physiological units, the existence of which various organic phenomena compel us to recognize, we get an insight into the phenomena of genesis, heredity and variation. If each organism is built of certain highly-plastic units peculiar to its species—units which slowly work toward an equilibrium of their complex polarities, in producing an aggregate of the specific structure, and

* Dunglison's Physiology. Generation.

which are at the same time slowly modifiable by the re-actions of this aggregate—we see why the multiplication of organisms proceeds in the several ways, and with the various results, which naturalists have observed."*

The following pages are intended to explain this process, and show that the theory agrees with the facts, as far as these have been ascertained.

Organized beings grow by an addition of substance, and they perpetuate by division. The most simple process of generation is observed in plants, where a branch coming to touch the ground on account of an increase in weight, shoots new roots and becomes afterward mechanically separated from the parent plant. This process becomes a function in some plants, as in the strawberry (*Frigaria virginiana*), which sends a prolongation of substance which develops at its end into leaves and roots, and becomes separated from the rest by the annual decay of the connecting fiber. This is best seen in the highly developed garden strawberry, and is not present at all in some of the wild varieties, nor in poorly-fed individuals of any variety. A physiological function is evolved from a mechanical process which proved advantageous to the organism thus first affected. The cause of this was that those branches which first touched the ground from an undue increase in substance, took root, and thus generated a new plant in a shorter time than the rest of the branches which went to seed and produced new individuals by seed-growth. The first also imbibed a greater amount of food from the soil, hence the new change was a doubly favorable one, and each branch in which the change occurred had almost triple vitality, triple chances of life, and multiplied so fast as to outstrip the plants which had not been thus first affected. This mode of reproduction is most developed in the banyan-tree of India, a single individual sometimes forming a small forest. In process of time such species of plants entirely cease from multiplying by seed-growths.

Whenever a cloud is blown apart by the wind, its parts continue to increase, while the watery vapor increases in the atmosphere till they condense into rain. If we break in two the first

* H. Spencer: Biology, Vol. I, Pt. II, Ch. X.

crystal formed in a crystallizing mixture, both pieces will equally increase by the addition of new crystals. This is a necessary result of gravitation; and in organic compounds we have the same process. If we cut a worm in two, we make two worms of it, and each one keeps growing. This is the primitive mode of reproduction in the bacteria. After a cell has grown to a greater extent than the instability of its material composition allowed, it breaks into pieces, and the two or more new granules grow into cells, if nutriment is supplied to them.

Upon dividing, the parts of a mass of protoplasm will be most all alike, their further growth will reproduce the parent mass, and their further division will perpetuate the same process of generation by fission. Such primitive mode is observed in the yeast-plant (*Saccharomyces cerevisiæ*).

But it is an axiom that no permanent state of things can endure for any length of time, on account of the perpetual action of gravitation, on unequally distributed matter. Hence an organic granule assumes in its growth certain differentiation; it becomes a cell by increase, and a chemical change occurs in the cell from an evaporation of water and other constituents; and by contact with the circumambient medium, a sort of hardening results, and a somewhat different substance forms by the escape of the most unstable atoms of nitrogen, so that this new compound has a more stable chemical affinity. This is a cell-membrane which consists of cellulose (C_{12} H_{20} O_{10}), and under some circumstances resolves itself again into protoplasm.* In fact, after reaching certain organization the mass disintegrates, completely or in part, to resume its first state, and out of each of its granules, which are all alike, other cells will grow, and each one of them will have a tendency to harden on the surface, and thus become invested with a cell-wall or membrane. All masses grow from their centers first, according to the laws of gravitation and chemical affinity, and the first start of the granules is probably the chemical molecule of the compound. By expansion the nucleolus, which does not differ from ordinary organic granules in its appearance, becomes a nucleus, and a nucleus becomes a cell, which is a mass

* Bessey's Botany, Ch. III.

of granules; and through such an expansion the nucleus becomes homogeneous as the cell-wall did. In this condition of homogeneity the mass is much more stable, since the less differentiated a substance, the greater its stability or its molecular attraction, which is the same thing.

Any new divisions of this mass of protoplasm result in as many cells, which soon acquire a cell-membrane and a nucleus by further absorption of substance. The first cause of this inheritance of a differentiation on the part of the progeny of these cells is their being placed under similar conditions as the parent, and even if the parent mass had had no cell-membrane nor nucleus, or if it had been deprived of them, the progeny would necessarily form a cell-membrane and a nucleus under the influence of growth and gravitation, and this is proved by reproducing low organisms from an undifferentiated part of their protoplasm. Another cause of such inheritance lies in the fact that when a cell undergoes any differentiation; that is, is affected in some way by any mode of force, each particle of that mass is affected in the same manner to some extent, according to universal attraction, and must show this differentiation more whenever it increases. Thus, any one cell of a higher organism strictly corresponds to the whole, and undergoes the same changes on a small scale; and its growth must, under the same circumstances of force and surroundings, reproduce the parent in every particular. And it will differ from it in the same proportion that the atoms which become added to it, and the modes of force by which it is evolved, differ from the same factors in the parent.

Accordingly, the nearer two cells are to each other, in matters of space, time and composition, the greater their resemblance, and the greater their capacity for reproducing each other, since all modes of force act in inverse ratio to the distance. Thus, after amputation of a limb, the cells of the stump have a tendency to reproduce such a limb, and do so in the lower organisms.

Hence, the reproduction of animals and plants, rightly understood, assumes the character of an exact science, and its results can be mathematically ascertained in advance; and that is precisely what is done to-day by stock-breeders.

Whenever the process of fission is taking place rapidly from

an abundance of food, each cell remains in contact, forming a compound organism. A compound of many cells is like a large cell, and necessarily undergoes the same differentiation, on a greater scale than a single cell would; the hardening of its surface becomes an ectoderm instead of a cell-membrane, and the organism grows mostly from the center of the body.

According to the law formulated above, each cell in a compound organism undergoes changes identical with those that the whole undergoes, affected as it is by all the various modes of force; and, if detached from the rest, it will, under the same circumstances, reproduce the animal or plant; so that a part of the mass, or any cell, or any portion of a cell, is absolutely capable of reproducing the parent. Here, natural selection becomes more evident. Those compound organisms which grow rapidly under favorable circumstances will have cells growing faster, maturing earlier, separating from and reproducing the parent organism before the latter has attained its maturity. Here, then, we have a progeny produced during the life of the parent organism, and the animal or plant has a higher degree of viability than the one which ceases to exist in procreating by fission. Hence organisms multiplying by spores, as the above process is called, will survive. They are larger, they multiply more rapidly, and are surely higher than the monads.

A compound organism, upon undergoing more differentiation, ceases to be homogeneous; each of its parts may become compound also, and any one cell will need undergo much differentiation in order to reproduce the parent, somewhat as in growing potatoes or apples from their seeds; and whenever a few of the most differentiated cells aggregate and become separated, or what is still easier, when they separate from the parent and then unite, their further growth will reproduce the organism in a much shorter time, than whenever reproduction takes place through one cell alone. This concrescence of cells is the origin of sexual reproduction. This process does not by any means arise all at once, but it already exists in the monads. The lowest bacteria often mingle together, several coalescing into one, and one dividing into several, though they have undergone no differentiation. And the three processes of generation by fission, by spores and

by a concrescence of cells, are sometimes possible in the same animal or plant. In this admixture of cells from the most differentiated parts of an animal or plant, those organisms will grow the faster in which this coalescence is most readily performed. Some of these cells are supposed to arise from the ectoderm, and others from the endoderm, these being the most differentiated parts of monads; at any rate, whenever some of these cells assume a more favorable shape than that of a sphere — and they perpetually change their shape — they penetrate other spherical cells much more readily; hence the early evolution of pointed cells, which are called androspores, and represent the male individual. The same process in the granules of the androspore gives rise to slender, diamond pointed spermatozoa.

In bacteria, the bacillus anthracis shows the evolution of fission into spore-generation, whether it lives in animals, or is cultivated in very rich food, as strongly-oxygenated serum, its growth being seven or eight times more rapid in the latter (*Toussaint*).

In the Gregarinæ we have reproduction by the concrescence of two individuals, and also by simple fission. In the Acinata, a species of Infusoria, we meet generation by the concrescence of different individuals; and the two other processes are also possible in these organisms.*

The various grades in the differentiation of spermatozoa from ovules are found in Pandorina, a sort of algæ, in Zygulmaceæ, and in Funaria hygrometrica.†

The spermatozoön is thus more differentiated than the granules of the ovule to which it corresponds, while the ovule itself has its analogue in the seminal vesicle which encloses the spermatozoa, and this explains the physical superiority of the male. However, the ovule, as well as the spermatozoön, and every particle of either, should be adequate to reproduce the entire organism of either sex, and so they are whenever most of the conditions under which the parents were evolved can be gathered in a small compass; but this is only possible in low forms of life.

In the male and female of the human species we have, as it were, two widely differentiated parts of a compound organism,

* Gegenbauer: Comparative Anatomy, §§ 69–70.
† Bessey: Botany.

and the union of the spermatozoön with the ovule brings these elements back to their former homogeneous condition, capable of reproducing either parent. The fact that many more male children are conceived may be ascribed to this higher integration of force in the male, and to an indirect mode of natural selection also; while the greater mortality of male fœtuses greatly depends on an inferior physical development of the female, as obstetricians will find by noting down the sex of the child in difficult labors. Sexual selection has probably much to do with this also. For, while strength and physical development in the male are great incentives to love from the other sex, the same attributes disparage females in the eyes of the males of the human species.

Any change that an animal undergoes under influences of climate, food, diseases, etc., is also undergone by each of its cells, but specially by the reproductive cells, which do not form part of any differentiated tissue. It could not be otherwise, since all modes of force act at all distances and through all substances. Hence, nothing opposing, the shape, the size, the character, the features, the infirmities, and the entire individuality of the parent will be developed in the progeny. But there are many modes of force opposing this, as the circumstances of time, place and surroundings are changed, the food different, etc. In case the generating substance does not participate in the differentiation of the parent, it must reproduce something more like the ancestors. This is atavism—a common occurrence.

According to the laws of generation, then, peculiar impressions received by the pregnant mother also affect every cell of the fœtus, and that sometimes accounts for those unduly developed faculties, and for idiosyncrasies in the child whose mother has been thus affected during child-bearing. This satisfactorily explains most of what are called cases of maternal impressions, even those extraordinary cases in which the children of a second husband all resemble the first husband. This is the more plausible, when we find that mental impressions are purely dynamical phenomena. This also accounts for a few peculiarities of monsters. This inheritance has been thoroughly demonstrated by the late experiments of M. Mason, of the Royal Academy of Belgium, who succeeded in producing atrophy of the spleen in

the progeny of rabbits by removing that organ in the parents. In the same way, the external conditions being attended to, a naturalist has produced all sorts of monsters in chickens, though maternal impressions were impossible here.

If we admit the fact that each animal cell has its nervous system, and all the physiologieal functions, though undeveloped, as explained above, their reaction to all modes of force accounts also for the most extraordinary cases in which children have been known to inherit the vivid perception of facts which their mothers observed while they were carrying them. That is a direct transmission of sensations through the senses of the mother to the brain of the fœtus. Of course, we all know of the inheritance of instincts, as that of birds for building nests, which is a cause of individual existence, as Darwin has shown; and Lindsay, in his valuable work on Comparative Psychology, also demonstrates a transmission of general knowledge, the result of experience in either the father or mother.*

The fact that every cell in the human body is properly an organism, and consequently must be conscious, explains those authenticated cases in which people have received various impressions otherwise than by way of their special senses.

In mentioning the modes of force whose ensemble is called the course of nature, we refer to gravitation, which does not apply only to planets and to inorganic matter, but also to animals, and regulates our every movement; to chemical affinity, by which every substance in the animal body is formed, maintained or renewed; to heat and to electricity, both of which are factors in life; to light, etc., etc.; to natural selection, which plays such a wonderful part in the evolution of animals and plants; and to that redistribution of matter and force on earth by man, at the expense of his own energy, something equivalent to a new creation, and in perpetual opposition to the previous state of things, although its outgrowth. It is also true that a variety of modes of force and their bearings on life and generation, are unknown to us in our present capacity for knowledge.

"There are more things in heaven and earth, Horatio,
Than are dreamt of in your philosophy."

* Lindsay: Mind in the Lower Animals, Vol. I.

ARTICLE III.

TRADE MARK PHARMACY. By HORATIO R. BIGELOW, M.D., Washington, D. C.

An attempt is being made to foist upon the American Medical Association the responsibility of discriminating between manufacturing pharmacists, in their endorsement of certain time-honored preparations. Coupled with this is a malevolent and ulterior motive of creating an open rupture between the physician and druggist. The gravity of the two purposes is my excuse for dwelling so frequently upon their ultimate issues, and for publishing my views in the different medical journals of the North, South, East and West. It is of superlative importance that the intelligent practitioner should thoroughly digest these matters in all their manifold phases, especially in those salient features which immediately concern his conceded prerogatives before the next meeting of the Association at St. Paul. As an educated body of men, whose lives are devoted to the amelioration of suffering and whose practice is governed by well-defined laws of self-respect, of courtesy and of justice, we are unwilling to be the puppets of any misguided manager who seeks to press us into his service as actors upon the stage of trade rivalry and trade jealousy. Our calling is professional rather than commercial. If we err in matters touching upon practice, we are to be judged by a tribunal of our peers, and not by laymen, who may be actuated by selfish or ignorant motives. Neither is it consonant with good sense or good taste that those outside the pale of legitimate medicine should dictate to us in the purely professional regulation of fees or of therapeutical polity. As a common brotherhood we are banded together for self-protection, for self-enlightenment, and for the regulation of certain ethical laws which shall govern our inter-communion. We pretend to be able to adapt all of these to suit our necessities, and we are perfectly able to manage our own affairs, without the presumptuous interference of mischief-makers. We are accustomed to construct our prescriptions upon well-thought-out principles, and to order such drugs as experience has taught us are of the greatest efficacy. We recognize our in-

debtedness to modern pharmacy for valuable additions to our armamentarium, and for the pleasant and palatable preparations of nauseating medicaments. Certain members of our own profession, together with others honored in society, recognized as men of high sense of honor, and many of them graduates of our learned universities, have entered into business for the sole purpose of furnishing pure drugs of an unalterable standard, in such forms as may not disgust our patients. These elegant products of their zeal and industry have added luster to our practice, and have proved of measureless value. The good name, fame and personal reputation of the manufacturer is indissolubly connected with his wares. The convalescence of our patients depends upon the strict purity and unvarying quantity of these preparations: our own reputation hinges upon our faith in them. To protect all these common interests, and to prevent fraud and deceit, the pharmacist trade-marks the products of his laboratory. What gross injustice and what danger to us, to our patients, and to the manufacturer, would result upon a discontinuance of the system. The law is protective in all its ramifications, just as the sworn policy of the Government is protective. The Government is a mere verbal synonym of an aggregation of individuals. The protective tariff is framed in the interest of home industries. So the individual member of this corporate body protects his industry, and the law and the people endorse his action. Physicians must recognize that for them there can be no other protection than this trade-mark system. It is the only safe guarantee. Can it be supposed that the nestors of medicine—the names that we most love to honor—would endorse in medical literature, these additions to elegant pharmacy, simply for any selfish delight in seeing their names in print? It would be well for us and for our children, if this incoming wave of grotesque "New Remedies" could be stayed and if the few deserving new discoveries, could come to us guaranteed by trade-mark as to purity and by endorsement as to efficacy. Let us take personal interest in the matter, and protect, as we are in duty bounden, the common interest of the profession.

ARTICLE IV.

STUDIES IN THE MEDICAL BOTANY OF SOUTHERN ILLINOIS.

By J. M. G. CARTER, A.M., M.D.

III.

Asclepiadaceæ, or Milkweed family, cannot be said to contain any very important remedies. Still, there are at least two plants of this order growing in this portion of our State which should be mentioned as possessing medicinal virtues. These are common milkweed or silkweed (Asclepias Cornuti, A. Syriaca) and pleurisy-root (A. Tuberosa). A. Cornuti or A. Syriaca is anodyne and expectorant, alterative and cathartic in its properties. It has been recommended in scrofulous affections and bites of snakes and insects. It may be used in decoction, any part of the plant being used; the dose of which is a tablespoonful *pro re nata.*

A. Tuberosa (butterfly-weed, pleurisy-root) has properties similar to the preceding—diaphoretic, anodyne, expectorant, cathartic, and slightly astringent. It is used in pleurisy, pneumonia, consumption, diarrhœa, dysentery and rheumatism. It has been used as a gentle tonic for the stomach, and has been considered of value in the exanthematous diseases. The dose of the powder is twenty grains several times a day. It may be administered in decoction or infusion, in the proportion of ℥j to Oj. Dose tablespoonful every hour or two.

The division Apetalous Exogenous plants contains some valuable remedies.

The Pokeweed family (Phytolaccaceæ) is represented in our section by Phytolacca Decandra (common pokeweed). This plant, called pokeweed, pigeon-berry and garget, is not confined to low grounds, as is sometimes said, but may grow anywhere if the soil is rich. Its action is emetic and cathartic in large doses. It is said to have some narcotic properties. Its substitution for ipecac cannot be recommended. It has been used internally in chronic rheumatism and granular conjunctivitis with good results. It has been used locally in inflamed mammæ, and in certain cutaneous diseases. I have seen the infusion so used in scabies

with apparent success. The infusion has also been recommended in piles. "An ointment, prepared by mixing an ounce of the powdered root or leaves with half a pound of lard, has been successfully used in psora, tinea capitis, and other cutaneous diseases." A tincture may be used in rheumatism, in teaspoonful doses thrice daily. The powder may be used in five-grain doses as an alterative, and in twenty-grain doses as an emetic.

Of the Buckwheat family (Polygonaceæ), we have a representative in Polygonum Hydropiper (common smartweed). This plant is little used in this region, because of its irritating properties; but it is said to have diuretic and other valuable medicinal virtues. It has been used in amenorrhœa and other uterine troubles with asserted beneficial results. The leaves may be used in powder (gr. iij to xx), infusion or decoction (℥j to Oj), the dose of which is a tablespoonful thrice daily.

Several varieties of Dock, all belonging to this family, are found in Southern Illinois. Among these may be mentioned yellow or curled dock (Rumex Crispus), pale dock (R. Brittannicus), and bitter dock (R. Obtusifolius). R. acetosellus, or common sheep-sorrel, is very abundant, and when fresh is a pleasant refrigerant in fevers. The Docks are astringent, tonic, alterative, and some of them slightly laxative — resembling rhubarb.

We have an abundance of Sassafras, a tree of the Laurel family (Lauraceæ). The Sassafras Officinale, or Laurus Sassafras, is used with us more as a demulcent and diaphoretic than as an astringent. It is a very common remedy in colds, in the form of hot tea, taken at bedtime. The bark of the root, the part generally used, has been supposed to have stimulant properties. "The complaints for which it has been particularly recommended are chronic rheumatism, cutaneous diseases, and scorbutic and syphilitic affections." The oil may be given; or, which is more common, the tea or infusion *ad libitum*.

The Mistletoe family (Loranthaceæ) is represented, in our woods, by Phoradendron Flavexeus (American Mistletoe). This poisonous plant has not been used as a medicine, so far as I am aware, but would produce results, probably, similar to European mistletoe, which was once considered to be a powerful antispas-

modic, and a valuable remedy in palsy, epilepsy, and other nervous diseases.

Ulmaceæ (Elm family). I think Dr. Gray, in his Manual of Botany (Ed. of 1867), has confounded two varieties of elm under the name "Ulmus Fulva." He calls this tree "Slippery or Red Elm," and says that it has a "tough, reddish wood, and a very mucilaginous inner bark." The slippery elm of this region has a whitish, brittle, mucilaginous inner bark; the wood near the bark being also whitish, but reddish within, and easily split. What we call red elm has a tough, reddish bark, used largely for bottoming chairs. It has an astringent taste. The reddish wood is very tough, it being scarcely possible to split it. We do not use the bark of the red elm medicinally, but the slippery elm bark is freely used as a demulcent. It often has an excellent effect in nausea and vomiting, acting as an anti-emetic. I have found frequently that the water of the bark would quiet an irritable stomach which morphine, calomel, bismuth and oxalate of cereum had failed to relieve.

The Bread Fruit and Fig family (Artocarpeæ). There is one representative of this, growing chiefly in old fields—that is the Morus Rubra (Red Mulberry). This berry is a laxative, and the juice is grateful in fevers. In the form of syrup it is valuable as a gargle in sore throat.

Urtica Dioica, or common nettle of the Nettle family (Urticeæ) grows abundantly in Southern Illinois in lanes and by roadsides. I have never made any use of this remedy, but it has been supposed to be diuretic and astringent, and has been employed in diseases where these properties might accomplish good, as in kidney diseases, hæmorrhoids, etc. Uterine hæmorrhage has been successfully treated with a decoction of the plant (℥j to Oj) in teacupful doses *pro re nata*. It has been used with asserted success in consumption, jaundice, worms, and locally in palsy. The young shoots are sometimes boiled and eaten by the people for scurvy.

Cannabis Sativa, or C. Americana (Family Cannabineæ) is found growing in waste and cultivated grounds. This may be employed in the form of the officinal preparations, or the flowering tops may be used similarly to hops as an anodyne poultice. It

is of especial value in neuralgia and rheumatism. This plant has the same virtues as C. Indica, so fully described in text-books.

The four preceding families belong to the natural order Urticaceæ, of which they are sub-orders. To the same natural order (Urticaceæ), and the preceding sub-order (Cannabineæ), belongs Humulus Lupulus (Common Hop). Although Hop is indigenous to this part of the country, our chief supply is obtained from gardens, where it is cultivated. It is used very largely in domestic and professional practice as an anodyne, in the form of poultices. In severe headaches I very often secure relief by directing a hop pillow to be placed under the head. Restlessness may be controlled in the same way. Humulus has some value as a tonic in dyspepsia and intermittents. For its tonic effect, hop tea may be used. The remedy is useful in nervous tremors, wakefulness, and delirium tremens of drunkards.

Order Juglandaceæ (Walnut family). To this family belong the Walnuts (black and white), Juglans Cinerea (Butternut, White Walnut) and J. Nigra (Black Walnut). Both grow in our section of the State, the latter very abundantly. The leaves are valuable in scrofula. While J. Cinerea is the only officinal variety, J. Nigra is very likely quite as reliable a medicine.

I have frequently observed the laxative effect of the kernel of the black walnut. The inner bark of the root of either variety may be used in decoction for the same purposes as the leaves or oil. In large doses any of these parts may be used for catharsis; the mildness of the action resembles that of rhubarb.

Carya (Hickory), another member of this family, is represented by several varieties in our vicinity. I have never used the bark or leaves of this tree, nor indeed any other part, in medicine; but I have seen it used by the common people as a tonic, astringent and detergent. Those who have used it have faith in its virtues. The leaves and inner bark, probably that of the root, are most valuable. As a tonic and astringent, they are used in the form of decoction; as a detergent, as decoction or poultice. The C. Sulcata (Western Shell-bark Hickory) is the only variety I have known used; but the following varieties are found here, and are perhaps just as valuable as remedial agents:

C. Olivæformis (Pecan-nut); C. Alba (Shell-bark Hickory); C. porcina (Pig-nut); C. Amara (Bitter-nut).

Order Cupuliferæ (Oak family). The inner bark of any of the oaks may be used for medicinal purposes. There are a great many varieties of oak (Quercus) in Southern Illinois, several varieties of which I have myself examined. I have been informed that there are more than twenty varieties of the white oak. I shall name only a few of the best known varieties. They are as follows: Quercus Alba (White-oak); Q. Obtusiloba (Post-oak); Q. Macrocarpa (Bur-oak); Q. Bicolor (Swamp White-oak); Q. Humilis (Chinquapin-oak); Q. Imbricaria (Shingle-oak); Q. Aquatica (Water-oak); Q. Nigra (Black-jack); Q. Falcata (Spanish-oak); Q. Coccinea (Scarlet-oak); Q. Tinctoria (Black-oak); Q. Rubra (Red-oak); and Q. Palustris (Pin-oak).

While the bark of any of these may be used, and many of them are used by the people, only Q. Alba and Q. Tinctoria are officinal. These have both tonic and astringent properties, and may be used in either indication. The decoction is frequently recommended as a bath for debilitated children, with a view of toning up the skin and strengthening the system. The chief use I have made of oak bark is as an astringent in hæmorrhoids. I have used it where ordinary remedies had accomplished little good, and have been very much pleased with the results. I direct that a strong decoction or infusion be made, and that the part be bathed three or four times a day. Usually only a few days are required to produce a cure in any case that can be relieved without an operation.

The Willow family (Salicaceæ) is represented by several varieties in Southern Illinois, the most important of which are Salix Nigra (Black Willow), and S. Babylonica (Weeping Willow). The bark of these trees contains the active principle, salicin, from which salicylic acid may be obtained. A decoction of the bark is a good remedy in malarial fevers and rheumatism. It has tonic and astringent properties, and may be used as a substitute for Peruvian bark. It has the antiperiodic effect of quinine, and has been used with success in intermittents; but its power is inferior to that of the sulphate of quinia. "The decoction of

willow has been found beneficial as an external application to foul and indolent ulcers." The powder or decoction of willow bark may be used in the same doses as cinchona.

Although not so prolific of medicinal plants as the class to which all the preceding remedies belong, still, the class of Monocotyledonous or Endogenous plants contains several remedial agents growing in Southern Illinois. I shall mention only a few of them.

Order Araceæ (Arum family). This family is represented by two common medicinal plants which I shall mention: Indian Turnip and Sweet Flag or Calamus.

Indian Turnip (Arisæma Triphyllum) has been used in asthma, whooping-cough, chronic catarrh, chronic rheumatism, and as an alterative and tonic in various cachexiæ in emulsion. It is considered stimulating to the skin and lungs. In the form of a syrup or honey it is valuable in aphthous sore mouth of children. The root should be partially dried before using, to expel some of the acrid properties. In the form of emulsion the root may be given in doses of gr. x to xxx, beginning with the minimum dose. The decoction may be used as a fomentation in diseases of the lungs where counter-irritation is indicated.

Sweet Flag (Acorus Calamus) is quite abundant in portions of our section. The plant, the root or rhizome of which is used, is an aromatic, and may be so used with children in colic and flatulence. It is a valuable adjuvant to cathartic medicines. It is useful in debility or torpor of the alimentary canal, and as a general systemic stimulant tonic. It may be given in the form of decoction or infusion (℥j to Oj, aq. bul.), the dose of which is a wineglassful. Children frequently like to chew the root. It is supposed that this plant was known to the ancient Greeks under the name acorow.

Cypripedium, of the Orchis family (Orchidaceæ), is represented in this vicinity by several varieties, three of which, C. Candidum, C. Parviflorum, C. Pubescens, are used as medicinal agents. All these, called White Lady's Slipper, Small Yellow Lady's Slipper and Large Yellow Lady's Slipper, respectively, are perhaps of equal value. The rhizome is the part used. Cypripedium is a mild stimulant to the nervous system, being valuable in the

treatment of hysteria, hypochondriasis, neuralgia, etc. It may be given in the form of powder (gr. fifteen) tincture or infusion.

Iris family (Iridaceæ). Iris Versicolor (Larger Blue Flag) grows quite plentifully in this portion of the State. The rhizome is the part used. The powdered root, if kept in bottles protected from the air, may retain its virtues for several months or a year, perhaps longer. Its medical properties are cathartic, diuretic and emetic. It is useful in dropsy. It may be used in powder, decoction, infusion or tinctnre. The dose of the powder is gr. iv to xx.

This is only a moiety of the medicinal plants of Southern Illinois, but perhaps the most important are included in these brief studies.

ARTICLE V.

INJURIES OF THE EYE. Clinical History of some recent Cases in the Practice of C. A. LAMBERT, M.D., Surgeon in Charge, Goshen, Ind., Eye and Ear Infirmary. Reported before Elkhart County Medical Association, December Meeting, 1881.

Case I.—*Traumatic Aniridia.*—Mr. J. W. J., æt. twenty-six; occupation, teamster; reported at office October 19, 1881.

History.—October 11, eight days ago, while at work skidding logs, was accidentally struck a violent blow by a skid, fracturing malar bone at outer canthus, and cutting the cuticle so as to produce considerable hæmorrhage. The eye must have received at the same time much of the force of the blow. He was knocked to the ground and stunned, and came near vomiting after recovering from the concussion.

Status Præsens.—Wound over malar bone healed. Can feel injured bone, and trace fracture of malar bone well into orbital plates, above and below. Complains of ciliary, temporal, and general hemicranial neuralgia, loss of appetite, restlessness; the neuralgic pain is very acute. Eyeball, T+2. Sclera greatly injected. No rupture of cornea nor sclerotic. S=O. Cornea

clear. Iris completely gone; lens dislocated upward and backward well into vitreous, and completely opaque; cannot detect any rupture of capsule. The lens inclines backward at an angle of about 30°; aqueous very cloudy, and contains strips of coagulum. By oblique illumination can, inferiorly, discern a dark red ring, but cannot get any red reflex. There are general symptoms of choroiditis.

Treatment.—Eserine sol., and dry compress for ten days, when patient was discharged, with eye in the following condition. Light enters the eye readily at lower margin of lens, and with ophthalmoscope can get a brilliant red reflex. Can count fingers at five feet, when held vertically and well above level of the eye. I expected to have to remove lens, but the eye has remained quiescent up to this time, three months after the injury; and in case the patient returns, I respectfully invite some suggestions from the readers of this report, and they will be thankfully received. I am satisfied the iris did not escape from the eye, for there was no rupture of cornea or sclerotic, and I suppose the iris is in the fundus, and will prove a source of future trouble. Then, again, as the lens has nothing supporting its present position but the vitreous, it cannot fail to act as a future source of mischief to the eye. The fine question arises, of the propriety of its removal when the iris is completely gone.

Case II.—*Hæmorrhage into Anterior Chamber from Traumatism.*—Mr. Jacob Groff, æt. forty-three.

History.—Received injury to left eye two days ago, while hauling logs. He struck out at an unruly ox, and the whip-lash came home to him, striking the left eye; says that the blow on the eye made him sick, and that he came near vomiting, and that the eye became blind at once.

Status Præsens.—Temporal and ciliary neuralgia. Lachrymation, S=O. Anterior chamber filled with a blood coagulum. Cannot see any of the iris.

Treatment.—Compress and atropia for ten days. Eye thoroughly recovered. S=$\frac{20}{20}$.

Case III.—Peter Surfus, æt. fifty-seven; occupation, farmer.

History.—Four days ago, while feeding flax-straw into the cylinder of a threshing machine, and just as he was stepping

aside to give place to a relief, a piece of split flax-straw, about one-fourth inch long, flew from the cylinder with such tremendous force as to penetrate the cornea.

Status Præsens.—Circumcorneal injection, some photophobia and lachrymation, and some slight ciliary pain; could see the piece of straw resting on anterior surface of iris, and directly across the pupil, in a horizontal position.

Operation.—Patient anæsthetized with chloroform; applied fixation forceps; rotated eye a little inward and upward, and then introduced a straight iridectomy knife to its full width into outer and lower quadrant of corneo-scleral formation; allowed the aqueous to escape freely, anticipating that the straw would follow at least a few lines toward the incision; but the contrary happened—the straw receded. I then introduced a pair of iridectomy forceps, with the beaks tightly closed, and by a very patient wriggling movement, and carefully pressing down the iris, the forceps at last reached the straw. I felt that I had but this one chance, and congratulated myself that I was able to seize the straw and withdraw it on the first effort. We took the precaution to instil sol. atropia before making the incision. The usual dressing, as in iridectomy operation, was applied, and the eye made a complete and rapid recovery. S=$\frac{20}{20}$.

Case IV.—*Traumatic Lens Extraction and Iridectomy.*—James Mc., æt. twenty-one years; occupation, farmer.

History.—Three weeks ago, while currying a horse, received injury to one of his eyes. The horse suddenly raised his limb, and the knee struck the young man's eye a violent blow.

Status Præsens.—Three weeks after injury, has a partially absorbed blood coagulum in anterior chamber, which extends from the wound up to and into the pupil, hiding corresponding portion of the iris; wound partially healed. T–3. S=$\frac{1}{20}$. Pupil dilated upward under use of atropia; attached somewhat below. I think the lens has escaped from the ball; can get no reflex from the fundus. The blow ruptured the cornea around margin, from base to vertical meridian around to outer extremity of horizontal, and extending into sclerotic in same course for 3‴.

Treatment.—Tonics; ferri et ammoniæ citratis in port wine, collyr. atropiæ sul., shade for the eye, and cautioned him of any

excesses. April 22, wound nearly healed; hæmorrhage being rapidly absorbed; iris has an appearance as though an iridectomy had been made at lower border at the time of the injury. Lens certainly has escaped; vision improves; can see choroidal discoloration in scleral wound. Patient can, with this eye (the right one) count fingers and see quite small objects. The lens escaped through wound in cornea and sclerotic. There is no retinal trouble; the ball is not sensitive, but is somewhat atrophied; but remains quite natural in appearance, and sight constantly improves.

Case V.—*Paralysis and Loss of Sight from Injury.*—Master Chas. H., æt. fourteen years; healthy.

History.—Had received injury five weeks ago to right eye; was struck accidentally with a stick on outer and upper portion of globe; accident was followed by violent spasms, and frequent vomiting for some twenty-four hours after injury.

Status Præsens.—Exophthalmos; iris widely dilated; lids discolored, and complete ptosis. S=0. Has ciliary and temporal neuralgia. Vitreous hazy; chronic retinitis; has paralysis in second, third, fourth, sixth, and ophthalmic branch of fifth, with its branches, lachrymal, frontal and nasal; the branches of nasal, ganglionic, ciliary and infra-trochlear. Lids and eye-ball completely immovable.

Treatment.—Comp. syr. phos. ferri quiniæ et strych.; collyr., atropiæ sul.; but the chief reliance was on a current of electricity used twice each week. Condition March 25, has regained all motions of lids and eye-ball excepting upward; no other deformity. Pupil dilated. Has white atrophy of optic papillæ. S=0.

Case VI.—*Paralysis of all the Muscles of Lids and Eye-ball.*—John Mann, æt. nineteen years; farmer; healthy.

History.—Two weeks ago, when at home, and while groping around early in the morning, in search of his boots, he accidentally, when stooping, jammed the lower quadrant of the left eye against the spool-holder on the sewing-machine. The blow made him violently sick for about twenty-four hours.

Status Præsens.—Complete paralysis of all the muscles of motion of eye-ball and lids; marked ptosis and exophthalmos. S=$\frac{20}{20}$.

Treatment.—Comp. syr. phos. iron, quiniæ et strych., and a current of electricity twice each week. After three weeks' treatment, the effects of the injury passed entirely away, and the recovery was perfect.

GOSSYPIUM HERBACEUM.—The following are the results of a series of experiments upon the physiological action of this drug, by J. Charles Martin, M.D. With frogs a large amount of the drug was necessary to produce definite results, 20 to 30 M. of the fluid extract being required. Stupor, inattention to surrounding objects, lowered perception of impression, and diminished muscular activity were the prominent symptoms developed. Nerves such as the sciatic preserve their irritability, as do the muscles also. Sensibility is only gradually lost as larger amounts are given. Reflex action is not destroyed, and there is no change in cardiac function, neither depression nor stimulation.

When similar injections were made in frogs, the medullæ of which were divided, and the sciatic nerve on one side of each isolated by ligating all the tissues, reflex functions, motility and sensibility were found to be unimpaired, and were exactly the same in each limb. Therefore it is concluded that the stupor noted in the former cases was due to the cerebral effect of the drug.

Experiments upon pregnant rabbits, which usually conceive and abort with equal facility, showed no effect from the medicine upon the uterus. Even toxic doses produced no hyperæmia or other effect on this organ. The symptoms manifested were gradually increasing stupor, and in the same ratio impairment of motility and sensibility.—*The Am. Jour. Medical Sciences, January.*

Clinical Reports.

ARTICLE VI.

DENTIGEROUS CYST. By EUGENE S. TALBOT, M.D., D.D.S., Lecturer on Diseases of the Mouth and Jaw, at Central Free Dispensary, Rush Medical College.

GENTLEMEN:—This patient, David T——, comes to us from Wisconsin for treatment. He is a farmer, twenty-eight years of age; has always been healthy. About five years ago, he noticed pain and swelling at the septum of the nose, and at the apex of the roots of the central incisors. The teeth are quite loose, and tender to the touch. The tumor has continued to grow until now the face is quite disfigured. You observe the lip is distended to such an extent that the teeth and gums are quite visible. Upon raising the lip, you will readily see the large, dark-colored tumor, extending from the canine on the right to the canine on the left side. By placing my fingers on either side of the tumor and gently tapping it, the movement of fluid is apparent at the opposite finger. I then press upon the hard palate with one finger, which forces the fluid against the finger under the lip; which proves it to be a sac containing fluid, and that absorption of the anterior portion of the maxillary bones and palate bones had taken place. Is this an alveolar abscess? Let us see. Upon examining the teeth carefully, I find no cavities, and by reflecting the light upon them with a mouth mirror, I discover no discoloration. These facts, together with the slow growth of the tumor, prove that it is not an alveolar abscess. We pass the exploring needle into it to ascertain the kind of fluid it contains, which is safe when there is no doubt about the character of a tumor. We see, upon the removal of the needle, a thick, yellowish, serous

fluid at the opening. With the bistoury, I make free incision from one side to the other, and discharge its contents. Upon raising the lip and reflecting the light into it, we see a white, glistening body at the floor of the cavity. With forceps I remove a supernumerary tooth, which will be passed around for examination. We frequently find one of the permanent teeth imbedded in the jaw, causing tumors of different varieties, which are easily diagnosed, from the fact of its absence from its natural position; but a dentigerous cyst caused by a supernumerary tooth is very rare.

THE ALIENIST AND NEUROLOGIST, edited and published by Dr. C. H. Hughes, of St. Louis, has completed its second volume, and has thus far fully verified the early promise of its publisher to render practical, for the benefit of the general practitioner, the interesting, widening and instructive departments of psychiatry and neurology.

We are advised by the publisher that the journal is financially on a secure footing, it having been well sustained thus far, and that it will begin its third year with a better table of contents than any hitherto offered, and with flattering professional encouragement and substantial financial aid. The third volume begins January 1, 1882. Subscription, $5.00 per year. The trial of Guiteau brings forcibly to mind the necessity of a discriminating knowledge of psychiatry such as the *Alienist and Neurologist* endeavors to impart.

OL. SANT. FLAV.—This has been employed largely for the last twenty years in the treatment of gonorrhœa, and urethral and vaginal discharges generally, says R. Park, M.D., in *The Practitioner*, and to stop a discharge he believes that it is the most specific drug, but it should be continued a fortnight after the latter has stopped. It is efficient in both acute and chronic cases. It certainly has a drying effect upon all the mucous surfaces, when healthy or diseased.

Society Reports.

ARTICLE VII.

THE CHICAGO PATHOLOGICAL SOCIETY. Stated Meeting held at the President's residence, Nov. 28, 1881.

Dr. Henry M. Lyman, President, related a remarkable case of

RUPTURE OF THE HEART.

The patient, a man sixty-two years old, had had several attacks of cerebral rheumatism, but no acute attack of the disease. He was rather plethoric. Last summer he suffered from dyspnœa and syncope at various times. During the autumn he went shooting ducks, but a paroxysm obliged him to return, and he felt a severe pain in his chest. At one A. M. severe paroxysms set in, and seemed to arise from the stomach. There was no angina pectoris. An hypodermic injection of ¼ gr. of morphine was given, and partly relieved the pain. Before morning the patient got up, and while he sat on the chamber-pot, he fell over dead.

Post-mortem.—Thorax and abdomen looked normal. As soon as the pericardium was laid open a heart clot came into view. The cardial muscle was degenerated. The left ventricle was rent an inch in length near the septum. Laying open the ventricle, there was no atheroma, nor valvular disease. The portion of the clot nearest the rent was white, and gave evidence of being older than the rest. The exertion at the hunting ground must have been the first step in laceration, which afterward continued; the effort at defecation having proven the last cause of the rupture.

Remarks.—The general impression is, that rupture of the heart

must necessarily be sudden, and cause instantaneous death. In this case, life must have been prolonged about fifteen hours after the beginning of the injury. The cavity of the pericardium was pretty well filled, though not distended. The walls of the heart at the point of rupture were rather thick. This case was one of fatty degeneration, and the heart was overloaded with fat besides. Fatty degeneration of the walls of the heart, the doctor remarked, was often met with after death, especially from anæsthetics; yet death did not always take place, and, as the disease had no symptoms, it was almost impossible to be aware of it before an autopsy was made.

GUBLER'S THERAPEUTICS.

Dr. H. M. Lyon reviewed orally the late American edition of Gubler's Therapeutics. This work has recently been translated. The author had one of those well-developed minds which had given the subject the most careful study. He had made a very thorough study of botany, and his works were numerous, especially in physiological chemistry, and allied sciences. He had been connected with many important societies, and his works had often been rewarded by medals and prizes. His book was especially valuable to learned practitioners, and he had carried the study of the subject to its higher laws.

The arrangement of division was not very well marked, however. The elimination of medicine was highly considered, and a large part of the therapeutical effects of drugs was referred to the change brought on by elimination.

The tolerance of drugs was also treated of at length in regard to tobacco, arsenic, opium, etc. The antagonism of medicines was treated briefly and in an able manner; and Gubler denied the fact of idiosyncrasies, except as something rare. We are now in the midst of a great change in chemical nomenclature. Organic compounds, as gluesides, hydro-carbons, etc., give us many intricate compounds. Hence, in the forming of alkaloids, it was doubtful whether the resultant compound always partook of the elements in its therapeutical workings. Such instances as the bromide of quinia were considered.

As to the classification of medicines, Gubler reviewed several:

said it was impossible to make an absolute classification, and proposed a physiological one which was not any better. He illustrated the correlation of forces in the use of coffee, opium, etc., which prevented an excessive expenditure of forces. These medicines add more force to the system, as it were. Ainstie had made the same remarks in regard to the tonics, which are different from stimulants.

The hypodermic use of aconitia, bromo-hydrate of quinia and of jaborandi had been introduced or generalized through Gubler's works, and the bromo-hydrate of quinia never gave rise to any abscess, nor to cinchonism.

Dr. H. M. Lyman was conversant with the book. It was full of suggestive ideas, some rather old, yet every one became interested in its reading.

ARTICLE VIII.

CHICAGO MEDICAL SOCIETY. Dec. 5, 1881. Dr. E. Ingals, President, in the Chair.

MALARIAL KERATITIS.

Dr. F. C. Hotz read a paper with the above title, and recorded a few cases from his notes and from memory. In ordinary cases of keratitis, he kept the eye shut, and covered up with charpie, retained in position by a bandage. Superficial ulceration could thus be made to heal very readily. In describing malarial keratitis, he said that the ulcer of the cornea is raised, and may creep on the entire surface; there is severe pain, photophobia and lachrymation. It extends for a few weeks, and reparation may require a few months. This takes place through an elongation of the deeper blood-vessels. This ulcer is just as characteristic as the patches found in the mouth in syphilis. Malarial or remittent fever may or may not accompany or precede this affection; as a rule it does, and quinine is especially successful as a constitutional treatment, even after local treatment has failed.

Case I.—Æt. twenty-six, came under treatment in January, 1881. Five days previous to this, patient had a chill. Kera-

titis set in, and a linear abrasion of the epithelium formed. He prescribed a lotion of atropine, and saw the case five days later. There had been no relief, and the inflammation was the same. Quinine was administered, and the patient began to improve immediately. February 5, the inflammation was gone, leaving a slight opacity of the cornea. One grain of quinine had been administered hourly.

Case II.—Æt. thirty-five, a conductor on a railroad. Patient had a severe keratitis of a week's standing when he consulted the doctor. He was directed to use atropine ointment and wear a bandage; but the inflammation increased during the following week. He was then administered quinine, and in six weeks he was well; the opacity had cleared away.

Inasmuch as these opacities are slow to clear, an early diagnosis becomes very important. He was persuaded that in malarial keratitis, the ulceration had a typical appearance, and he related other cases confirming his views.

Dr. W. T. Montgomery had also met a few characteristic cases of the disease under consideration, and besides employing ordinary local means, he had given four grains of quinine three times a day. The opacity had cleared.

Dr. E. L. Holmes had had the same class of patients, but he had been in the habit of treating all of them with quinine since his early days of practice. He also gave the same remedy in cases of chronic discharges from the ear, and in chronic affections generally. Of late, he had not given quinine quite so often, yet he prescribed it whenever local means failed, and in obstinate conjunctivitis. Some authors had discovered parasites in these diseases, but he had never observed them, and believed they might be secondary to the inflammation. The doctor reported a case of tetanus caused by a foreign body (a splinter of wood) in the orbit. October 12, 1881, a boy fifteen years old climbed up a scaffold six feet in height, and fell on a splinter of wood perpendicularly stuck in the ground. The splinter entered the left lower eyelid, and there was free bleeding from the nose. The doctor saw the patient a few days later, removed a piece of wood from the wound, and dressed it with a lotion of salicylic acid. The right eyelid began to inflame, and after a while was more

involved than the left, which seemed partly restored, while the right eye was markedly exophthalmic. Patient had double vision. The wound discharged very little pus, but as much more flowed through the nostrils. After a week, the patient noticed that he had difficulty in opening his jaw, and the next day he had trismus, which increased in severity for a week longer, when Dr. Hotz saw the case. Deglutition was difficult, and fluid passed into the larynx. The conjunctiva was slightly œdematous, and the internal rectus muscle seemed affected. There was optic neuritis. By probing the wound, he felt a piece of wood extending to the right orbit, outward and backward, two inches deep; and a thin lamella of broken bone could also be felt in the wound. He succeeded in removing it, together with the piece of wood. Some improvement set in. The oxophthalmos decreased, but the improvement was only of a short duration. The next day the trismus was more pronounced, and the respiration became confined to one side. Patient died the next day in opisthotonos. The splinter had passed from one orbit into the other, through the left lachrymal bone, close to the cribriform plate. There was some emphysema of the orbits and of the face.

ARTICLE IX.

CHICAGO MEDICAL SOCIETY. Stated meeting, Jan. 16, 1882. Dr. E. Ingals, President, in the Chair.

Dr. L. H. Montgomery read a lengthy report of the preceding meeting, which was accepted after a few corrections. These reports of the Secretary are intended to give a *résumé* of all papers which have come before the society, and are very valuable.

Mr. Stanton, of the *Chicago Medical Review*, read the paper announced for that evening, on

OPENING AND DRAINAGE OF JOINTS,

by Drs. Chr. Fenger and E. W. Lee.

From the earliest times, suppurative arthritis had been looked upon as a very serious disease, which sometimes caused the death

of the patient, and generally left permanent injury. There were cases on record in which a spontaneous opening of the cavity of a joint, with escape of the pus, had been followed by recovery. However, although thus indicated, the means at hand did not legitimate the drainage of such suppurating cavities before the introduction of Dieulafoy's aspirator.

It was found, however, that aspiration, beneficial in a few cases, was useless in a majority of them, and the antiseptic method of treating abscess promised far better results. In reporting the following cases, the authors of the paper did not believe that they could give anything new to the profession, since similar cases had already been reported; but they believed that a better acquaintance with their results would induce other surgeons to follow it, and, in future, we could entirely dispense with amputation in such cases, and, if opened early, the chances were that a certain amount of motion at least would be insured; but they considered the use of the spray, and other particulars of the method taught by Lister, a *sine quâ non* for a successful operation.

More than ten years ago, five cases of drainage of the joints had been reported, and since that, a few sporadic cases had appeared in medical papers at various times. The most superficial joints, that is, those that were of easiest access, naturally suggested the first trials; as the elbow, the knee and the ankle. Only a few of the other joints had ever been opened. In the knee, a diagnosis was easy, and a slight amount of fluctuation could be detected. Two of their cases were of that joint.

Case I.—A. S., female; admitted to the County Hospital May 30, 1879. Two weeks before admission, inflammation, with swelling of the knee, had manifested themselves, with an intense pain, which went on increasing, and fever set in. June 5, her temperature was 103°. Some pus had been aspired from the knee, and June 16 an elastic bandage was applied. June 29, joint was aspired once more, and July 1 the temperature was 105.2, and vomiting occurred.

The patient having been anæsthetized, Dr. Fenger made an incision in either side of the patella, passed in a fenestrated rubber drainage tube, which was retained in position by sutures, and

washed the cavity of the knee with a solution of 2.5 per cent. of carbolic acid. The temperature fell, the pain was relieved, and re-dressing was done July 4; all in accordance with the antiseptic method. Patient improved from the day of the operation. July 21, the drainage tube was removed, and the wound allowed to heal. October 3, the plaster cast was applied to immobilize the limb, and the patient obtained about as good a leg as the sound one, with a fair amount of motion. The patient, two weeks after the operation, had thronbosis of femoral vein, which gave rise to a high fever; and later she had a diarrhœa which retarded her final recovery.

June 5, 1880, she was quite well.

Case II.—E. M., female; had acute rheumatism, followed with a suppurative inflammation of the knee-joint. Aspiration was resorted to twice without marked results, and it was decided to operate.

July 14, the patient having taken ether, the knee was opened on either side of the patella under the spray, and irrigation was made through a drainage tube, in the same manner as in the first case. July 16, it was re-dressed, and the outer half of the drainage tube was removed, and the rest of it was taken away July 19. August 7, the limb could be bent at right angle; November 22, this leg was almost as strong as the other one. In this case there had been hardly any fever during the treatment.

The operation in such case should be made in the following manner:

Make a short incision half an inch from the border of the patella, and pass a probe through the incision and through the joint to the other side, about half an inch from the border of the patella on that side; then make another incision, cutting on the point of the probe. Pass the drainage tube from one incision to the other; wash the cavity with a solution of carbolic acid, 2.5 per cent., and attach safety pins to the ends of the drainage tube, after soaking in a solution of carbolic acid. Then, after dressing the knee antiseptically, suspend it in a fenestrated splint. Re-dress as often as necessary, under the spray, and remove the drainage tube after no new pus is formed. Then put

the limb in a plaster cast, let the patient get a high soled shoe for the healthy limb, and let him go about on crutches. After five weeks, remove the plaster cast.

Operations on the ankle joint are not so favorable, partly because the capsule of the joint forms two pouches, one anteriorly and the other posteriorly.

Case I.—N. B., æt. thirty-seven, came under treatment July 20, 1880. Had suffered from poli-articular rheumatism, and had suppurative inflammation of the left ankle joint.

July 25, the pain was intense, and other symptoms rendered the operation imperative. After administering ether, two incisions were made on either side of the joint, anteriorly to the malleoli; the cavity was washed, the drainage tube and dressing applied. The drainage tube was removed after six weeks. September 15 the opening had healed. There was some stiffness left.

Case II.—P. G. B., æt. twenty-two; male. In April, 1879, a plank struck his left ankle. The injury passed away; but three months later, pain, swelling, and inflammation set in. He was admitted to hospital in September.

November 15, the joint was opened in the manner above described, and the drainage of the cavity insured. There was no denuded bone found. The drainage tube was removed in a week, but had to be re-inserted December 19 for two weeks. Six months later there was limited flexion, but the limb could not be used. Six months after this, the patient was yet unable to walk without crutches, and there was necessity for another operation, but he would not submit to it.

Case III.—A. S. had rheumatic inflammation of ankle joint, with suppuration, and was operated on September 25, with all the precautions described in regard to the other cases. October 8 the tube was removed in part, and the rest of it taken away October 15. October 24, another incision was necessary, and the drainage tube, then re-inserted, was afterward removed November 24. It had to be re-inserted in January. Further particulars of the case will be reported later.

Notice that in such cases, the life of the patient is sometimes saved by the operation. The fever and the pain immediately abate, and improvement follows. In operating on the ankle, the

doctor believed that two drainage tubes and four openings, two in front and two behind the malleoli, would answer better than the method here followed. It would involve no additional danger, if made under the spray.

An early operation saved some mobility, and prevented a disintegration of the articular extremities, which, after it had taken place, would be very likely to cause some anchylosis.

DISCUSSION.

Dr. Roswell Park asked whether, in cases of chronic synovitis, with sero-fibrinous exudation, without pus, and in which repeated injections of 20 mm. of a 2.5 per cent. carbolic acid solution had been recommended—whether in such cases drainage of the joints was ever indicated?

Dr. Fenger said that in such cases the operation was not so imperative; yet he would not hesitate to open into the joint if repeated aspirations failed of curing the arthritis. However, it was mainly in cases where the cavity contained pus that drainage became necessary. This, made with antiseptic precautions, he considered devoid of danger. After opening into a joint, the doctor said it was always important to ascertain that no communication existed between it and some other cavities, and it was always better to make a counter-opening.

Dr. R. Tilley mentioned the fact that some of the most successful surgeons in Europe had discarded the use of the spray, and even that of carbolic acid, and had obtained as good results without it. He wished to have the opinion of some of the members present.

Dr. Fenger would not abandon the use of carbolic acid, because he had been so satisfied of the results obtained with it; no substitute could take its place, and the danger of pyæmia, always present in hospitals, could be avoided by its use. It was a fact that the best surgeons used it, and that the best results claimed for it were in connection with the filthiest hospitals. Advices to the contrary he considered as unreliable. It was true that Lawson Tait had obtained good results in ovariotomy without the use of the antiseptic method; but he did not consider that in

such cases there was as much tendency to suppuration as in almost any other class of operations.

Dr. E. W. Lee, one of the authors of the paper, said that, although an admirer of Lister's method, he was obliged to abandon the spray in self-defense five months ago. The results obtained with it had always been satisfactory, but it affected his health, and every operation prostrated him. The spray sometimes gave away, or some other particular of the method was neglected, and this accounted for failure in the results, which otherwise were very satisfactory. He did not believe that any other method could be substituted for it, and that where free incisions were made without antiseptic precautions, there was always more suppuration, and a necessity for more frequent dressings. The doctor alluded to the packing of suppurative cavities with iodoform, but he believed some degree of poisoning had followed its use in many cases.

ARTICLE X.

MICHIGAN STATE BOARD OF HEALTH. Reported for the CHICAGO MEDICAL JOURNAL AND EXAMINER.

The regular quarterly meeting of this Board was held January 10, 1882, at its office in Lansing; the full Board being present. The Secretary presented his quarterly report, showing some of the work in the office during the past quarter. The quarter has been a very busy one, made so, in part, by the numerous outbreaks of diphtheria, scarlet fever and small-pox in the State, which has required much correspondence and the sending out of many documents. The compilation and issuing of the weekly bulletin of health in the State is now so systematized as not to take as much time as at first. It is published in probably two hundred newspapers in Michigan. In response to a request, fifty-seven health officers of villages have begun to make weekly roports of diseases. The Board reaffirmed the demand for these reports from health officers of cities. To each place in the State where diphtheria, scarlet fever, or small-pox was reported present, a letter was written to the health authorities, giving full

instructions and suggestions how to prevent the spread of the disease. Documents containing elaborate and particular directions have been sent for free distribution throughout the vicinity. Each officer was requested to make a special report on the epidemic under his care, and some of the reports show how by determined action a contagious disease may be stamped out. The number of communications written during the quarter was 1,459. The number of diphtheria documents distributed was 29,000; of scarlet fever documents, 5,000; of general rules for restriction of contagious diseases, 6,000; reprints of weekly bulletins, 7,000. As showing the necessity for inspection and disinfection of immigrants, their clothing, baggage, etc., and especially for a system of surveillance to their destinations, a statement was made by the Secretary, of the introduction of typhus fever in Benzie county by Norwegian immigrants. The disease made its appearance over sixty days after the arrival of the immigrants, and spread quite freely (not being reported at the time or treated as a contagious disease by the local authorities), causing many cases of illness, and at least three deaths. The importance of inspection of immigrants at Port Huron, and of keeping those believed to be liable to spread communicable diseases under surveillance until their destination was reached, and then placing them in the watchful care of the local board of health, was freely discussed. As this Board has no funds available for such a purpose, the subject was referred to the President, Secretary and Dr. Lyster to confer with the National Board of Health, and take such action as is possible.

A report by Hon. LeRoy Parker, relative to duties of health officers in verifying diagnoses of contagious diseases, was read and ordered printed in the Annual Report. Mr. Parker reported the following: In Gaines township, Genessee county, a child of Mr. B. died of what a doctor called malarial fever, and did not report the case to the board of health, though it seems probable that it was really diphtheria. A neighbor and wife, Mr. and Mrs. B., assisted in preparing the corpse for burial. About the same time a child of Mrs. S. died from "sore throat," not reported as "dangerous to the public health," and some of the children of Mr. B. attended the funeral. Soon after Mrs. B. was

taken sick with diphtheria, and in turn thirteen out of fourteen members of the family had it, and seven out of ten children died. The board of health promptly isolated this household, but the attending physician's error in diagnosis, or failure to report the first case, was fatal to the hopes of that family. In this connection the Board adopted the following preamble and resolutions:

WHEREAS, It is often difficult to recognize mild cases of diphtheria, or to distinguish such cases from a simple pharyngitis or laryngitis; and,

WHEREAS, Such mild cases of diphtheria often communicate a dangerous and fatal form of diphtheria;

Resolved, That it is the duty of physicians and householders in reporting diseases dangerous to the public health, and of local health authorities in their efforts to restrict such diseases, in every case to give the public safety the benefit of the doubt.

Resolved, That suspected cases of dangerous diseases should be reported, and precautionary measures should be taken.

Drs. Kellogg and Avery were appointed a special committee to report on the present knowledge of diphtheria, and Dr. Lyster was appointed a special committee to report upon the present knowledge of typhoid fever.

Mr. Parker reported that persons guilty of removing contagious disease placards from their houses could be punished, under the law which made the house in which the contagious disease was, a hospital, if declared so by the board of health, and subject to their rules and regulations. All rules and regulations of a board must first be published, then penalties may be inflicted for any violations.

Dr. Avery, as special committee on the subject, made a report relative to the overflowed lands in Gratiot and Clinton counties, and presented a resolution from the Board of Supervisors of Gratiot county. In accordance with the report, the Board adopted a preamble and resolution, as follows:

WHEREAS, The Board of Supervisors of Gratiot county has passed resolutions asking this State Board of Health to investigate the subject of the sickness caused by the overflow of Maple River, because of the dam at Maple Rapids, and "to advise the removal

of said dam as being detrimental to the health of the communities living in the vicinity of said river;" therefore,

Resolved, That the Board of Supervisors of Gratiot county be informed that this Board has already had an investigation made, and from the report of such investigation is convinced that the dam at Maple Rapids causes a nuisance, and advises that, in case the owner of said dam will not remove the same, and thus abate the nuisance caused by the overflowing of land along said river, a bill in equity should be filed against the owner of said dam to compel him to remove the same.

The Secretary was directed to correspond with persons in some city in the western part of the State, relative to holding a second Sanitary Convention this winter. One will be held at Ann Arbor, February 28 and March 1. These conventions are held in accordance with invitations received from citizens, and under arrangements made by a local committee acting with a committee of this Board.

Dr. Hazlewood reported on the inspection of summer resort hotels as regards danger from fire, and asked if the present law providing for such inspection was not sufficient. Dr. Baker thought the law should be amended so as to take the inspection duties away from the political officers and place them among the duties of local boards of health. The question was referred to Mr. Parker, committee on legislation in the interests of health.

The Secretary presented a report of work of local boards of health, showing much good work done during the past season in the restriction of contagious diseases. He read letters showing the action of local boards of health with contagious diseases; one from J. R. Thomas, M.D., health officer of Bay City, relative to diphtheria; one from W. G. Elliott, M.D., health officer of Pontiac, relative to scarlet fever; and one from Foster Pratt, M.D., health officer of Kalamazoo, relative to small-pox.

The Secretary also read a *résumé* of work of other State Boards of Health, and it showed that typhoid fever was very widely prevalent; that small-pox was very prevalent in the Northern and Northwestern States, and that intermittent fever was present in Connecticut, Massachusetts and Rhode Island.

The next regular quarterly meeting of the Board will be April

11, 1882. There will probably be a special meeting of the Board in connection with the Sanitary Convention at Ann Arbor, February 28 and March 1, 1882.

METEOROLOGY AND CROUPOUS PNEUMONIA. — During the last three years, Dr. August Seibert has been carefully studying the combined influence of the various elements of the weather in producing croupous pneumonia. His conclusions have been deduced from a study of six hundred cases, observed in children under fourteen at the German Dispensary, New York.

By examining the meteorological phenomena of the three days prior to the reception of each of the cases, it was found that in seventy-eight per cent. the barometer was more or less strongly falling; in more than fifty per cent. it had fallen below the mean; in eighty-four per cent. the temperature was below 50° F.; in twenty per cent. the daily range of thermometer was 20° F. or more; in only four per cent. was there a strong falling thermometer; in fifty per cent. the wind was northerly; in thirty-three and one-half per cent. northwest, and in sixty-seven per cent. its velocity was fifteen miles an hour or more.

On comparing the lines of mean humidity and minimum temperature in comparative charts, it was found that in the months when pneumonia was the most frequent, the temperature was low and the humidity high. The greater the space between the lines, the more pneumonia; the less the space, the less the pneumonia.

From the facts gathered it may be concluded that—

1. A strong fall in the barometer;
2. A low thermometer;
3. A great velocity of wind;
4. A high humidity; and
5. Northerly winds, especially northwest, seem to favor the production of this disease.—*Am. Jour. of the Med. Sciences.*

Foreign Correspondence.

ARTICLE XI.

VIENNA, DEC. 26, 1881.

MESSRS. EDITORS:—Medical matters in this city seem very much the same to the writer as they did twelve years ago, when I attended lectures and private courses at the General Hospital for fourteen months. By some accident, I happened on my arrival in the city to meet a few American students at my hotel, who assured me everything was quite dull, and that I would see all of the city I wanted to in a few days, and that it did not come up to their expectations as a place for medical study. I found most of them to belong to a class of American students which is quite too numerous for our good name; who, while they enjoy the credit of completing their medical education abroad, spend more of their time at concerts, dance-houses and gaming-tables than at the hospital, and in many ways go contrary to the expectations of tender parents and anxious guardians. One young man was finding fault with the chambermaid about fleas in his bed. She told him he had brought them from the hospital. He replied it could not be so, as he had not been at the hospital for six weeks. Vienna holds out some attractions to a certain class of students more enticing than its medical advantages, and it is far better for the average young man to have practiced a few years, and become thoroughly convinced that he loves his profession, and to have found out his weak points before coming abroad. There are many industrious young men here, however, I am happy to say, who work early and late, and make the most of every opportunity. Oppolzer, Hebra, Dumreicher and Skoda, whom I listened to before, are dead, but supplanted

by Bamberger, Albert, Kaposi and Schrötter, who fill the chairs with perhaps as much ability and acceptance.

Albert, the successor of Dumreicher and colleague of Billroth, although comparatively a young man, is very popular, and his clinics are more frequented, I should judge, than Billroth's. Both of them are poor speakers, much of their lectures being inaudible, while they are surrounded by such a crowd of assistants that it is almost impossible for an ordinary student, from his seat, to see anything of the progress of an operation of any importance, and the lucky one who sits inside the ring as guest for two weeks may reap more benefit than a regular attendant for a whole winter. I think this detail may not be without interest, as I know many are seriously disappointed at what they are able to see in these, as in some other departments.

They have here, as in some other places I have visited, a regulation that retires a professor when he has reached the age of sixty, which I think in some respects wise; which, although in some cases it deprives the student of the accumulated experience of age and years of teaching, relieves the authorities of the unpleasant responsibility of asking the resignation of some who have outlived their usefulness, of which the venerable professor is not always the best judge. When a man, like Prof. Arlt, instead of talking from his profound knowledge and extensive experience, sits down and reads his lecture from one of his not too recently printed volumes, it is time to retire; and I believe this is his last year.

As is well known by many, there are here professors ordinary and extraordinary; the one belonging to the faculty proper, and attendance upon whose lectures is obligatory upon the student intending to graduate, while the same is not required with the other; and consequently, while he may have the same clinical material, he has but few followers, and really offers far better opportunities for observation and study than the faculty professor. For instance, while Arlt's clinics are crowded, Yaeger has generally but half a dozen, and material abundant, and such is the case with some others, and while some of the regular faculty are clamoring for larger audience-rooms, new amphitheaters, and various other accommodations for their hearers, students are

clamoring for more professors in some of the crowded departments, and better facilities to see, hear and learn. At present, the authorities seem to give but little heed to either petitioner.

Happening in to Prof. Carl Braun's obstetrical and gynæcological clinic, I heard the report of a patient who had died in six days after confinement, from fatty metamorphosis of heart and other organs. She had, in all, about fifty eclamptic convulsions. These came on before delivery, which was effected with forceps; without, however, influencing the spasms. She then had hot bath and purgatives, without effect. Then thirty grains of chloral were given, which checked them for two hours, when they recurred, and the dose was repeated until two drams had been taken without benefit, or only of a temporary character. Then she was bled several ounces, to have the blood tested for ammonium carb., when the convulsions ceased for several hours, and recurred. The examination did not reveal ammonium carb. The convulsions recurred, and these and other remedies were used, alone and in combination, but the pulse grew weaker and faster, until the patient expired. The lecturer remarked that the patient did not die of medicine, albuminuria, septicæmia, etc., but fatty metamorphosis. She had had the best of treatment known to the medical profession; and had the Almighty attended the case, He couldn't have saved her. The lecturer had given up venesection for many years, having no faith in its efficacy. Few patients recover who have convulsions before delivery.

Another patient was presented, upon whom an operation for recto-vaginal fistula had been performed without success. A second operation had been performed, with same unsuccessful result. He proposed to operate a third time, by first cutting from the vagina completely through the perineum, to the rectum, and make, as it were, a complete laceration, and also by cutting through the posterior part of rectum and sphincter; hoping by this method to secure a result, which by most careful manipulations he had failed to secure.

Such fistulas never occur in the wards of the hospital, or very seldom occur, and if they do, always heal themselves. It is only in aggravated, neglected and badly handled cases that an operation is necessary. As an illustration of the practice of the hospital

in such cases, a patient was brought in who had been in labor for some hours, and in whom there had been no progress for an hour. Forceps were applied and, as laceration was threatened, the labia were cut on either side and delivery without rupture effected. The vagina was washed out with carbolic acid, the incisions closed with sutures and the vulva dusted with idoform. The patient was then carried back to the ward. I forgot to mention that this patient was somewhat œdematous, the urine contained albumen, and convulsions were feared, but none occurred.

The next patient was one with a deformed pelvis, upon whom craniotomy had once been performed and had been recommended in the event of a second pregnancy to return at the fourth month for artificial and premature delivery. This had been safely accomplished without any complication, and the patient, at the end of eight days, was ready to leave the hospital.

Much more attention is given to antiseptics in this department than when I was here before, as it was quite uncommon then to wash out the uterus or vagina with carbolic acid, and students gave far less attention to themselves as conveyors of infection than now. A preserved specimen, consisting of the neck of uterus and large epithelioma, which had been removed from a woman several years before, was passed around the class. The patient made a good recovery and became pregnant. The os was so hard and contracted from the cicatrix that premature delivery was induced. She was again pregnant; the os had been scarified a number of times and dilated, and now she was pregnant again; and the question arose as to whether she should be permitted to go to her full term of confinement. His experience had not been very gratifying with such cases; nevertheless, as the patient was quite anxious to properly terminate her pregnancy, and as the os was in a far more pliable and elastic condition from the treatment she had received, he was quite inclined to grant her request. This is but a sample, in brief detail, of what one sees and hears at his clinics daily, and gives even an inadequate idea of the advantages to be enjoyed in this department. Frequent allusions are made during these lectures to New York and Chicago men of prominence in these departments, while their obstetrical and gynæcological instruments are frequently shown and used.

Nevertheless, as is well known, it is not the teachers in this department we come here to see, as we have the best in the world at home. Give the student at home the material and the opportunity to use, as we already have in some branches, and he need not come to this far-off land to complete his education.

ROCKFORD, ILL. WM. H. FITCH, M.D.

THE MENTAL PHASE OF "COLD-CATCHING."—It is noteworthy as a curious yet easily explicable fact that few persons take cold who are not either self-consciously careful or fearful of the consequences of exposure. If the attention be wholly diverted from the existence of danger, by some supreme concentration of thought, as, for example, when escaping from a house on fire or plunging into cold water to save a life, the effects of "chill" are seldom experienced. This alone should serve to suggest that the influence exerted by colds falls on the nervous system. The immediate effects of a displacement of blood from the surface and its determination to the internal organs are not, as was once supposed, sufficient to produce the sort of congestion that issues in inflammation. If it were so an inflammatory condition would be the common characteristic of our bodily state. When the vascular system is healthy and that part of the nervous apparatus by which the caliber of the vessels is controlled performs its proper functions normally, any disturbance of equilibrium in the circulatory system which may have been produced by external cold will be quickly adjusted. It is therefore on the state of the nervous system that every thing depends, and it is, as we have said, on the nervous system the stress of a "chill" falls. Consciousness is *one* element in the production of a *cold*, and when that is wanting the phenomena is not very likely to ensue. It is in this way that persons who do not cultivate the fear of cold-catching are not as a rule subject to this infliction. This is one reason why the habit of wrapping up tends to create a morbid susceptibility. The mind by its fear begetting precaution keeps the nervous system on the alert for impressions of cold, and the centers are, so to say, panic-stricken when even a slight sensation occurs. Cold applied to the surface, even in the form of a gentle current of air somewhat lower in temperature than the skin, will produce the "feeling" of a "chill." Conversely a thought will often give rise to the "feeling" of cold applied to the surface—for example, of "cold water running down the back." Many of the sensations of cold or heat which are experienced by the hypersensitive have no external cause. They are purely ideational in their mode of origination, and ideal in fact.—*London Lancet.*

Domestic Correspondence.

ARTICLE XII.

BOSTON LETTER.

MESSRS. EDITORS:—It is somewhat doubtful whether the new building for the Harvard Medical School will be ready for occupancy before next winter. Three stories have already been erected. The location is excellent. The present school building stands in a squalid portion of the town which must have surprised many a visitor. The new structure is located in the midst of the best quarter of the city, having fine churches, public buildings and private dwellings of the better sort in its immediate neighborhood. It is midway between the Massachusetts General and City Hospitals, to both of which students resort for clinical instruction. The new school building, therefore, will in many ways, aside from modern improvements, offer increased conveniences to teachers and students. Surgical operations will be done, and clinical surgery and clinical medicine will, as now, be taught in the two hospitals. Practical pathology will likewise be taught in a building specially constructed for the purpose in the grounds of the Massachusetts General Hospital. Dissection, however, will be carried on in the new building. Three hundred thousand dollars have already been raised to defray the expenses of construction.

The pathological building to which I have referred is probably unique. Its peculiarity consists in the details of the apartment in which the post mortems are made. It need not be said that the one difficulty in this feature of medical instruction is created by the formerly unavoidable odor from the cadaver when under the knife. This objection applies principally to first year men.

In order to vanquish this objection, Dr. Henry J. Bigelow brought his singularly apt ingenuity to bear, and his experiments resulted in perfect success.

The principal object being the disposal of foul gases, Dr. Bigelow determined to set in action, in some way, a series of draughts; and knowing that when a cadaver is opened the disagreeable odors arise chiefly from the trunk, he saw that the draught must act not only upon this section of the body, but must act *downward*. His conception resulted in a table of iron gradually depressed toward the center. It rests upon a hopper-shaped box, also of iron, supported in its turn by a cylinder which telescopes into the head of a larger cylinder, in which, near the floor, it revolves by means of a shoulder. Table and hopper are one. The former is accurately covered by a movable apron of zinc or oxydized copper, having in its center an opening measuring 20 by 28 inches, and corresponding to the position occupied by the trunk of a subject.

Into this opening fits a concave grating of polished steel. The hopper and the double cylinder,—the latter extending into the cellar below,—have a porcelain lining. In the basement, immediately under the center of the table, is the trapped opening of a large drain, which receives all fluids and such small solid matters as can pass through the meshes of the grating, the hopper and cylinder being much larger than the grating in the table. But it is the gases and odors for which this arrangement was conceived. Their escape requires a description of the most ingenious feature of the whole. Some feet down the cylinder, and nearly half way to its lower end, is a large aperture mouthing into a lateral shaft placed just below the floor of the post-mortem room. This shaft runs horizontally, and terminates fifteen feet away in a special chimney which passes upward through a small room adjoining the autopsy department. In this ante-room is a window let into the chimney. Opening the window, you find in the chimney a series of ten gas jets. Lighting these, and waiting a few moments for the warming of the air in the chimney, you hold a bit of burning paper over the opening in the table, and are surprised by the force with which the flame is drawn *down* the hopper. And this is the manner in which, during the exam-

ination of a body, gases and odors leave the room, its air remaining pure. A similar arrangement, on a smaller scale, is applied in an upright glass case with sliding sash, which encloses the sink, and is always kept shut. Herein, too, are gas-burners and a connection with another flue. During the examination, cleansing, or temporary disposal of an organ, this sink is used, and all odors are thus carried away. Hot and cold water serve the convenience of the examiner.

The autopsy table is supplied with every convenience to secure cleanliness, a small hose being the chief. The floor of the room is of asphalt, the washboards are glass, so that the whole place is frequently deluged with water, which runs off by means of scuppers and gratings which communicate with the main drain. Near the table is a glass case furnished with instruments of every sort; there is a large ice chest for the preservation of specimens; also a convenient room devoted to the preparation of specimens and microscopic work, and many other conveniences which render the place as nearly perfect as one can well imagine. The building is a neat structure of brick. The amphitheater is of moderate size, finished in chestnut, and abundantly supplied with light and warmth. Can you do better than to imitate this room in Chicago?

In the same district, and not far from the new building of the Harvard Medical School, a hospital for children is also in process of construction. The corner stone was laid June 13, 1881. The land embraces 31,000 feet. The building will cost $100,000, and will have every modern improvement. The hospital heretofore has occupied a large dwelling-house, but has outgrown its quarters. Thus far 1,590 patients have been treated, the institution being thirteen years old. The medical and surgical staffs are composed of some of our best men, and the interest of the laity in this hospital is warm and constant. The hospital has a very efficient auxiliary in the Ladies' Aid Association. They not only take upon themselves the entire care and support of the Convalescent Home of the hospital, but contribute largely to the latter in services, money and effects. When these buildings are finished you shall have a description of them.

I am happy to announce the publication of a new book by a

Boston physician. This is not so common an occurrence with us as to be unworthy of mention. Indeed, a volume of five hundred pages from the pen of one of our physicians but rarely appears in Boston. Our men are workers, hard workers in fact, but their pens are less prolific than those of physicians in other cities; why, it would be difficult to say. It is a Boston peculiarity. The author of the book to which I refer is Dr. Henry W. Williams; its title "Diseases of the Eye." It is charmingly written, is free from many of those technicalities which render works on the eye such dull reading to the general practitioner, and its subjects are presented with such simplicity of style and clearness of diction, that it will become a necessity even to those who do not make the eye a specialty. In short, to make use of that threadbare, hackneyed, but convenient phrase, the book "supplies a want long felt." Dr. Williams is professor of ophthalmology in the Harvard Medical School, and president of the Massachusetts Medical Society. He is well known as a distinguished oculist, and no physician of our city has warmer friends than he.

Another event which the members of our profession naturally regard with a feeling of pride, is the election of Dr. Samuel A. Green to the office of mayor. A fair indication of his character and of the esteem in which he is held, is the fact that Dr. Green is not a party, but a *citizen's* candidate. He entered upon his duties unfettered by promises to men or party, and his acts during the first fortnight of his administration evince an independence which, in these degenerate days of party influence, is truly refreshing. For years Dr. Green has been city physician, and his deeds of unselfish kindness and faithful performance of duty will not soon be forgotten. He has been one of the overseers of the poor, whilom chairman (without salary) of the Public Library, and in other and various ways he has shown a devotion to the interests of the city which makes his record almost exceptional.

A sad experience coming upon us within a few days has been the loss by death of Drs. Thomas B. Curtis, John Bacon and Edward Reynolds. Dr. Curtis was president of the Boston Society for Medical Improvement. His death was sudden and unexpected. Although but thirty-nine years of age, Dr. Curtis was considered one of the most brilliant and learned of the

physicians of Boston. Among the men of his years, he had no peer in his scholarly knowledge of medicine. His loss is irreparable. The society over which he presided have decided upon a portrait in oil, to be hung in the society hall as a fitting and deserved memorial of their lamented president.

Dr. John Bacon was less active in the medical world. Some years ago he retired from the chair of chemistry in the Harvard Medical School. Since that time he has lived a life of such seclusion as to have become almost forgotten in the onward rush of the lives of busier men. He died at the age of seventy years.

Dr. Edward Reynolds was a genial and most lovable old gentleman. Formerly very active, a pupil of the great French and English teachers of sixty years ago (Astley Cooper, William Lawrence, Dupuytren and Bichat), he was one of the first men who ever lectured on surgery in the East. In conjunction with Jacob Bigelow, D. H. Storer and O. W. Holmes, he originated and for many years taught surgery in the Tremont Medical School. He established the Massachusetts Eye and Ear Infirmary in 1815, and its success was due almost entirely to him alone.

As a *raconteur* he possessed most enviable qualities. Two years ago, being then eighty-six years of age, Dr. Reynolds one evening entertained one of our medical societies with reminiscences of deceased colleagues and former friends. The easy flow of his language, the polish of his style, his ready and fertile memory, his apt and elegant choice of words, his eloquence and wit, were as surprising as they were fascinating. Those who listened to him on this occasion will not soon lose the memory of the charm of his diction and delivery. Until the end his mind was clear, and he died the quiet, beautiful death of a beloved old man, of a physician who lived a long, earnest, fruitful, faithful life. His son, Dr. John P. Reynolds, is professor of obstetrics in the medical department of Harvard University.

BOSTON, Jan. 12, 1882. * *

ARTICLE XIII.

LAMOILLE, Jan. 24, 1882.

EDITORS CHICAGO MEDICAL JOURNAL AND EXAMINER:—The order of our Board of Health, requiring the children of our public schools to be vaccinated, has been very thoroughly obeyed in some towns of our county, while others have almost entirely ignored it. As a consequence of the order, and of a case of small-pox in the autumn, we have had more vaccinating to do this winter than ever before in the same period of time. I have successfully vaccinated three hundred patients, using pure bovine virus in every case but two. It is in connection with the effects of this same bovine virus that I write this letter, as some of its results are somewhat peculiar and may be worthy of note in your paper. All the points used have been purchased of Sargent & Co., of Chicago. I vaccinated one hundred patients in November last, that run a typical course, with two exceptions, one a child not previously vaccinated, and the other a young lady previously vaccinated and having a typical mark. They each had four days of severe fever, accompanied by pains in back and limbs, soreness of eyeballs, etc., followed on the third day by a copious eruption of a dark purple color, intersected by streaks of sound skin of a yellowish white shade. The eruption was in some respects like that of rötheln, but much darker in shade. It lasted about four days, then peeled off without desquamation; the arms at the same time were intensely swollen and almost black in color, with numerous yellow vesicles. I felt some concern at first, but they yielded to mild treatment, and were especially relieved by enveloping the swollen arm in vasaline dressing, recovering with an ulcer at the point of vaccination which was somewhat obstinate to heal.

Since the coming on of cold weather such cases have increased to an unpleasant extent; for the last fifteen days at least one in ten presenting the conditions described, only in a more exaggerated form—the fever being most intense and the eruption being more confluent in character. I neglected to say that eruption in all cases has been confined to parts of body and limbs covered with clothing, none appearing upon the face and but little upon the

hands. So far all the cases have yielded to a covering of the arm affected with a dressing which excludes the air, a little alterative and laxative medicine. No serious consequences have resulted as yet, but the severity of its action is creating some alarm and a wide-spreading objection to vaccination, and some concern on my own part, for fear I may get some serious complications on my hands. I am not informed as to whether other practitioners are having the same trouble. GEO. J. RICE, M.D.

THE DE QUINCY HOME FOR INEBRIATES, conducted by Drs. H. H. Kane and W. H. Vittum, has been removed to Fort Washington, New York City.

THE unusual amount of sickness in this city during the last few weeks, and the extraordinary demands which have, as a consequence, been made upon the members of the medical profession, have taxed severely many practitioners. Among those who are now ill, may be named Dr. E. O. F. Roler, who has been compelled to go to the South for a brief respite from his arduous duties as an active obstetrician; Dr. D. A. K. Steele, of the new Medical School, who is now recovering from a severe prostration; Dr. W. S. Haines, who has also been obliged to temporarily absent himself from his active work in the chemical laboratory of Rush Medical College; and Dr. Alexander Fisher, who, though compelled more than a year ago to abandon his professional career in consequence of the infirmities of age, is now lying seriously ill.

DURING the closing week of the past month, a veteran physician and pioneer in this Western metropolis, Dr. L, D. Boone, went to his long rest. Dr. Boone was a descendant of the famous Daniel Boone, of Kentucky.

Reviews and Book Notices.

ARTICLE XIV.—AMERICAN NERVOUSNESS. By G. M. Beard, A.M., M.D. 12mo. New York: G. P. Putnam's Sons. 1881.

Before any one can conceive of matter as center of forces, intersections of forces, or condensations of modes of force, he must first take a view of several of the elementary substances, look at them as separate entities, and see in what they resemble one another. He has to do the same with all modes of force before understanding the co-relation of forces. Before one is capable of understanding how species have been evolved by natural selection, he must acquire a few general notions regarding various species of organisms; and before a physician is prepared to investigate neurasthenia, he must be acquainted with nervous diseases in general. And so with *evolution* in all things. It is simply a deeper study, an insight into points of little bearing on the course of nature, since their results become sensible only after eons, though perpetually at work. Hence it is no wonder if we daily meet men of very limited knowledge, who tell us that they have attained the maximum point in wisdom; they are evolutionists; and they wonder how it happened that so many have borrowed their ideas. Yet, on practical questions, these men are found lacking in data, investigation or even memory. They only know the bearings of evolution.

Dr. Beard, in assuming the creation of nervousness in America, and relating its epidemic spread over Europe since, and in alluding to the legions of writers who have borrowed his ideas, lays himself open to as severe criticism as he has met. But evolutionists are so fashionable to-day, that naturally his books on nervousness—small, cheap, and devoid of technicalities—should

enjoy many new editions. They are at least a higher grade of pamphlets than the average advertising media of those specialists who treat *manhood lost*, although addressed to the public, as are the latter.

We will review this work in a spirit of evolution, down from evolution of matter to the evolution of insanity, and up to the evolution of the immortal soul, if necessary; but, granting that the leading principles of the book may be correct, we will mention all the deficient links, if possible, which should become a philosophical work, even when addressed to the American public.

This is a *supplement* to a *smaller* work, which we had the pleasure of reviewing a few months ago. But it is also the etiology of the disease considered in the other volume. This is retrogressive evolution, at least, if not disintegration in book-making. This new volume is also of a more philosophical (?) and popular character than the other. Follows an epitome of said philosophy.

1. Nervousness, the author says, is strictly deficiency or lack of nerve-force. It would not be difficult to show that the reverse is at least as true, and partly by quoting from his works; but every one knows that nervousness is more generally a superabundance of nerve-force misapplied. Thus, the nervous and mental diseases are more developed in those animals whose nerve-force is the greatest, as we see in Lindsay's Mind in the Lower Animals, Vol. II. Nervousness is also most developed, according to Dr. Beard himself, in the higher races, in which the nerve-force is also the greatest. We might also derive proofs from comparative anatomy to show that the author's proposition is very deficient, and that so must be the idea which underlies it, unless the fault is in the mode of expression; and one is inclined to think that such is the case.

2. The chief and primary cause of this is *modern civilization*. This is another paradox. If there is any stimulant and promotor of nerve-force, it is certainly the highest civilization. This the author would probably confirm, and own that his arbitrary division of said civilization into the five characteristics—steam-power, press, telegraph, the sciences, and the mental activity of woman—is at least very heterogeneous and deficient;

and many factors, such as religion, morality, continence, modes of education, and inheritance, have a greater bearing on one's nervousness than the steam-engine, although regarded as secondary and tertiary factors by the author.

3. Indeed, these are harmless, if not interwoven with the modern form of civilization (?).

4. Neurasthenia, evolved of nerve sensitiveness, is the natural basis whence certain physical forms of hysteria, hay-fever, sick headache, inebriety and some phases of insanity evolve. This is an important fact to ascertain.

5. "The greater prevalence of nervousness in America is a complex resultant of a number of influences, the chief of which are dryness of the air (?), extremes of heat and cold, civil and religious liberty, and the great mental activity made necessary and possible in a new and productive country under such climatic conditions." There is much truth in this. "Nervousness, in its extreme manifestations, seems to save one from ataxia, spinal meningitis, and interior spinal sclerosis." "Nervousness of constitution is, indeed, an aid to longevity, and in various ways; it compels caution, makes imperative the avoidance of evil habits, and early warns us of the approach of peril. Probably no great class of people in the world live longer than the professional and business men of America—the very class among whom these nervous disorders are so often found, the class that supplies the victims for our inebriate asylums." "Chewing is very rapidly going out of custom, and will soon, like snuff-taking, become a historic curiosity." Drinking is also on the eve of disappearance. Instead of referring such facts to an increase of nerve-force, far-sightedness, and progress in life and morality, caused by education and will-power, the author refers them to his favorite disease.

Americans, of the present generation, need only small doses of cathartics; and a professional man was unable to bear iron; it made his headache; nor quinine, it made him crazy; nor zinc, it irritated his stomach. "No people in the world drink so little fluid as we. In America pork, like the Indian, flees before civilization."

Constitutional diseases prevent local diseases and *vice versa*. This is a very doubtful proposition.

Early and rapid decay of the teeth; baldness; sensitiveness to heat and cold; thanks to neurasthenia, the Americans are comparatively free from gout and rheumatism.

The eulogy of American beauty by the author is charming, and founded on facts; it almost makes his work one of æsthetics. Dr. Beard assures us that the humorists are in greater demand as lecturers than philosophers, men of science, or of literature; however, we are of the opinion that a popular audience is still better entertained by a circus; but this is not confined to America.

Syphilis is growing milder because of the increasing nervousness of our time. It is comforting news for some to learn that brain-workers enjoy long life, and the chapter treating of this fact is one of the most interesting of the whole book.

In fact, the title, American Nervousness, is ill chosen, unless it means a perspective of the various changes taking place in the higher races, seen through "American Nervousness." As popular reading, although not humorous, this book is very interesting; but it lacks the philosophy of which it boasts. We anticipated that the author would take into consideration the biological fact that many nervous troubles make their appearance in families which are becoming extinct, as some diseases appear in species which are disappearing; that, on the other hand, with a diminution in the number of the offspring, there must be increase of vitality, characterized by longevity, beauty, talents, etc.; and one will question, perhaps with the author, whether neurasthenia is not a quality, a promoter of vitality, rather than a disease. A potent factor, not enough insisted upon, is the fact that a *complete* American individual consists of a few generations, not of one alone; that is, a first generation accumulates money, the next acquire learning, and the third is Dr. Beard's neurasthenic, while on the whole it is certainly the best representative of the highest civilization. H. D. V.

ARTICLE XV.—ARTIFICIAL ANÆSTHESIA AND ANÆSTHETICS. By HENRY M. LYMAN, A.M., M.D., Professor of Physiology and of Nervous Diseases, Rush Medical College; also, Professor of Theory and Practice, Woman's Medical College, Chicago, Ill. New York: Wm. Wood & Co. 1881.

Prof. Lyman has had a task of no small proportions, to group together in a systematic manner the excellences of the different authorities on anæsthesia. That he has performed this task well is apparent to any one who carefully examines this volume.

He has been successful not only as a compiler, but also as a patient, careful and original investigator. He gives the results of a series of experiments on animals and the human subject with chloroform, ethylic bromide, alcohol, ether, amylic nitrite and nitrous oxide. Sphygmographic tracings were taken during the different stages of anæsthesia, which are interesting, if not instructive.

After giving the history and phenomena of anæsthesia, the author discusses the physiology of anæsthesia. This is one of the most interesting chapters in the book. His physiological explanations in regard to sleep and anæsthesia are especially good. He argues that anæsthetic substances diminish or retard the specific molecular movements of nervous or muscular tissues. He says: "When it is remembered that the effect of an anæsthetic is temporary, and that it leaves the tissues in no way different from their original condition, it seems more probable that in the substance of the protoplasm through which the paralyzing agent is diffused, the anæsthetic operates to arrest those chemical changes—chiefly oxidation—that are associated with the normal diffusion of motion throughout the system. It effects no new combinations or decompositions among the molecules; it acts merely the part of a cloud between the sun and the earth, hindering the energies of the one from acting upon the susceptible matter of the other."

This chapter is followed by those on the administration of anæsthetics, inhalers, accidentsof anæsthesia and their treatment, anæsthetic mixtures, anæsthetics in obstetric and dental practice, local anæsthesia, mortality of artificial anæsthesia, medico-legal relations of anæsthesia, anæsthesia by rapid respiration and electricity, and a list of forty-seven anæsthetic substances, with their properties.

The author's style is so clear and even that it it is a pleasure to follow him in his most abstruse reasoning.

J. A. R.

ARTICLE XVI.—A TREATISE ON THE DISEASES OF INFANCY AND CHILDHOOD. By J. L. Smith, M.D. Fifth edition, thoroughly revised, with illustrations.

This is one of the leading text-books on the subject, and is highly recommended by professors to students. Unless one desires to make a specialty of that branch of medicine, it is also all that a general practitioner needs for reference. It is a good supplement to any work on Practice, none of which would be complete without it, or some analogous work. It must not be forgotten that more than one-third of patients are children, and although they must be treated "on general principles," these are not at all sufficient to answer the special circumstances of childhood which give to all diseases very different features from what they have in the adult, not to mention a variety of diseases which are peculiar to childhood alone. The illustrations are only thirty in number, and might as well have been omitted, for, as a rule, they do not elucidate the text of works on Practice, and are not expected to adorn them.

This edition is printed in a smaller type than the previous one, and "leaded," and presents a very good appearance. Indeed, this is a very handsome volume of 836 pages, bound in half Russia, with stained edges, in accordance with a new style of binding, started a few months ago by the publishers: Henry C. Lea's Son & Co., Philadelphia.

ARTICLE XVII.—A SYSTEM OF SURGERY, THEORETICAL AND PRACTICAL. In Treatises by various Authors. Edited by T. Holmes, M.A. First American, from Second English Edition, by John H. Packard, A.M., M.D., assisted by a large corps of the most eminent American Surgeons. In three volumes, with many illustrations. Vol. I.—General Pathology. Morbid Processes. Injuries in General. Complications of Injuries. Injuries of Regions. 8vo, pp. 1008, two-columned, half Russia. Philadelphia: Henry C. Lea's Son & Co. 1881.

The case of the late lamented President Garfield has proved that there is a demand for a higher knowledge of surgery, and also of diseases of the mind, in the United States. Should our

knowledge of surgery be considered inferior to that of our English or French colleagues (a conclusion which may not be justifiable), it might be accounted for by the fact that medicine and surgery here have not yet evolved into that higher sphere when one's brain would be insufficient to pursue the study of both.

The list of English contributors contains such names as those of Burdon-Sanderson, Sir James Paget, T. Holmes, C. H. Moore, De Morgan, and eighteen other experienced surgeons, while the American revisers to this volume are such well-known writers as J. H. C. Sims, W. Hunt, James Nevins Hyde, M. Longstreth, S. Ashhurst, L. A. Stimson, J. H. Packard, J. S. Jewell, R. Bartholow, and a few other celebrities.

This work is cyclopædic in character, and every subject is treated in an exhaustive manner. It is specially designed for a reference book which every practicing surgeon should have under hand in cases which require more than ordinary knowledge. The illustrations consist of nine chromo-lithographic plates of great beauty, and 240 wood cuts.

Inflammation, Syphilis, Tumors, Wounds, Fractures, Dislocations and Injuries are all treated in this volume, besides other important matter; and an index is appropriately added at the end of the volume. H. D. V.

ARTICLE XVIII.—A TEXT-BOOK OF PRACTICAL HISTOLOGY, WITH OUTLINE PLATES. By W. Stirling, M.D., S.C.D., With thirty outline plates, one colored plate and twenty-seven wood engravings. Quarto, cloth, pp. 130; $4.50. Philadelphia: J. B. Lippincott & Co. 1881. Chicago: Jansen, McClurg & Co.

This is a book for students, and the outline plates are all intended to be filled by him—a manner of studying which has never been received with favor in the cramming medical colleges now so common. Yet this is certainly the surest means to acquire a practical and thorough knowledge of histology. Such a work is invaluable for those practitioners who delight in the use of the microscope; and the clear type, comprehensive arrangement and accurate delineations lend a charm to a study otherwise

dry and uninteresting. The introduction of this book in medical colleges is very desirable, and should be specially encouraged by professors of histology.

ARTICLE XIX.—INTRODUCTION TO PATHOLOGY AND MORBID ANATOMY. By T. H. Green, M.D. Fourth American, from the fifth and enlarged English edition. With 138 fine engravings. 8vo, cloth, pp. 348, $2.25. Philadelphia: Henry C. Lea's Son & Co. 1881. Chicago: Jansen, McClurg & Co.

An old professor of the practice of medicine used to teach treatment in these few words: "Gentlemen, take your pathology and treat the case accordingly." If his students had all possessed the book under consideration it might have easily supplemented the ignorance of the lecturer in matters of treatment; for this is no common work, no hypothetical treatise, but embodies a wonderful amount of knowledge in so small a compass, and treated in such a clear style that every physician should supply himself with every new edition as it comes out.

No late discovery or investigation has been overlooked; and the illustrations are the best that ever accompanied any book on the subject. In few departments of medicine has so much progress been made of late as in that of pathology, supported as it is by the promising sciences of biolology and physiological chemistry, and these lie at the basis of scientific treatment. It will repay most practitioners to peruse this book at least two or three times.

ARTICLE XX.—THE MICROSCOPE AND ITS REVELATIONS. By W. B. Carpenter, C.B., M.D., LL.D., etc. Sixth edition. Illustrated by twenty-six plates and 500 wood engravings. 12mo, cloth, pp. 882. Philadelphia: Presley Blakiston. 1881. Small type.

A passing notice of this voluminous work is all that should be expected. It is acknowledged to be the most comprehensive work on the subject in the English language. The reputation of the author is world-wide, and through his profound knowledge of physiology this work has been made to suit the medical more

than any other scientific profession. It is also indispensable to the biologist, and its researches reach far into palæontology. The reader ought to remember, however, that some assertions met with in this work are based on unascertained facts, and some are opposed to the conclusions of men who, in their special studies, have penetrated deeper than the author. H. D. V.

CORRECTION.—The article on Injuries to the Head, which appeared on page 65 of the January number of the JOURNAL, was erroneously credited to the Annals of the New York Surgical Society. It should have read ANNALS OF ANATOMY AND SURGERY. We have had frequent occasion to make extracts from the pages of this valuable periodical; and take occasion to say, that under the management of its distinguished editor, Dr. James E. Pilcher, it constitutes a storehouse of science which should be in the hands of every practitioner of surgery.

ACTION OF DUBOISIA ON THE CIRCULATION. — Dr. Gibson has a memoir on this subject in the *Journal of Anatomy and Physiology*. The properties of duboisia have been investigated by Mr. Tweedy, Dr. Ringer and Dr. Fraser, and they have shown that it dilates the pupil, dries the mouth, quickens the pulse, arrests perspiration, produces headache, causes drowsiness, and finally induces tetanus. The conclusions at which Dr. Gibson has arrived are: 1. That duboisia in quantities not exceeding 0.005 gram, raises the arterial blood-pressure without materially affecting the pulse-rate. 2. In quantities not exceeding 0.05 gram it diminishes the blood-pressure and lessens the pulse-rate. 3. In quantities of 0.05 gram and upward it causes death, with the heart in a state of diastole. 4. Upon the heart itself duboisia has but little action, except in very large doses—*i. e.*, doses of more than 0.05 gram—and it then causes arrest of the heart in diastole. 5. Duboisia stimulates the central inhibitory mechanism. 6. The alkaloid paralyzes the peripheral inhibitory apparatus. 7. Duboisia stimulates the central vaso-motor apparatus and causes contraction of the arterioles in small doses; in large doses it lowers the activity of the central vaso-motor mechanism, and dilates the arterioles. 8. Duboisia has no influence over the sympathetic nerve.—*Louisville Medical News.*

Editorial.

PHYSICIANS AND PHARMACISTS.— The short article in this number of THE JOURNAL AND EXAMINER, in which the practice of some physicians in signing certificates testifying to the qualities of medicinal agents and compounds, and of pharmacists in putting *trade marks* on their productions, is commended, has been admitted on the principle that both sides should be heard, and not because we agree with its sentiments. On the contrary, we think that both practices are in bad taste, and essentially vicious in their tendencies. N. S. D.

CHANGES AND APPOINTMENTS.—Dr. Louis Elsberg, of New York, has resigned the position he formerly held in the Medical Department of the New York University, and has received the appointment of Professor of Laryngology and Diseases of the Throat in the Dartmouth Medical College.

INDIAN HABITS AND DISEASES.—The following letter, though not written for that purpose, is worthy of record.—[ED.]

UNITED STATES INDIAN SERVICE,
PAPAGO AGENCY, DECEMBER 25, 1881.

MY DEAR PROFESSOR:—As I promised you a letter concerning my new location here in Arizona, I will take to-day, Christmas, as opportunity offers, to write you something of a detailed account of the modes and customs, together with the diseases of my Indian subjects. The Indians among whom I am located are by name the Papagoes, and are members of the large nation known as Pimas, who inhabit this Territory, and also extend far into Mexico. The Papagoes, long years ago, sundered their connec-

tion with the great nation on religious accounts; the Papagoes being religiously inclined, and the rest of the nation not. They cut their hair short, and have ever since worn it so. They constitute a large portion of the Indians in this section of the country, and extend several hundred miles into the Mexican territory.

They are preëminently peaceable, and also intelligent; but in war they are great warriors, and are to this day the terror of the Apaches, although they have never been known to be hostile to the white man. They live in rude huts; some of sun-dried brick, others of stone. They are poor farmers, and consequently are insufficiently nourished. The men and women appear well developed, and are manly, fine-looking people. They are not superstitious, and have no traditions that I have been able to learn. Their language is of a most curious character, and no white man, I believe, has ever mastered it. It is almost exclusively guttural.

They are but little inclined to strong drink, which is rather peculiar, I believe. The virtue of their women is actually unimpeachable, and death to both parties is the penalty of adultery or fornication. They are considered the purest Indians in this Western country, while the Pimas, their own countrymen, are given to immorality and drunkenness. There is no syphilis among them, and I have never seen any gonorrhœa yet. Their children are healthy, fat, and fine specimens of youth. There is no scrofula amongst them, although the Mexican children all about here are full of it. I think this is a 'great credit to them.

The diseases of the Indians do not differ greatly from those of the whites. We have here, at certain seasons of the year, the essential fevers; malarial diseases of a varied character; some seasons of contagious diseases; little asthma and catarrh; considerable conjunctivitis, cataract, and other diseases of the eye; some ear troubles. Consumption is rare, and also the other diseases of the East and North. I have not had a chance of observing a single case of cancerous disease since I have been here, nor have I heard them speak of any diseases which might have been it. I believe you mentioned in your lectures that the percentage decreased as we went south. I shall make observations from time to time, and see what the relative amount of cancer is about here.

There are a great many Mexicans about the Reserve, and I think they are the most dissolute, ruthless and good-for-nothing set of people I ever saw. They won't work; don't know how to farm, and are the poorest teamsters, I think, in the world. None could be worse. None of them about here have anything laid up, and are only living on this land by the sufferance of Government.

I have observed a strange disease here, which is quite prevalent among Indian children, and which I forgot to mention. This is a disease known as dirt-eating, and which is mentioned by Dr. Flint in his work on Practice. The children first show a distaste for the mother's milk, refuse it, become crabbed and cross, cry a great deal, and soon they are observed eating dirt. They will continue this practice as long as they are not checked. It is evidently a disease of the digestive system, and probably is due to ill nutrition. The females are very productive, and bear children in quick succession.

There is near here the famous old church of San Xavier, which is supposed to have been built by the Franciscans in 1650. It is a marvel of art for those days, but is now crumbling away quite rapidly. Our dwellings, all through this country, are made of what is known as adobé, or sun-dried brick. They are peculiar-looking edifices. With best regards for yourself, etc., I remain, Yours sincerely,

DR. W. G. COOK.

THE HOSPITAL FOR WOMEN, SOHO SQUARE, W. LONDON, DEC. 15, 1881.—A marble bust of Dr. Protheroe Smith, the founder of the Hospital for Women, Soho Square, the first of its specialty, was recently presented to the institution by friends and patients, and was unveiled this day by Sir Rutherford Alcock, K.C.B., the chairman of the committee, on being placed in position in the hall of the hospital. The work has been well executed by Mr. Belt.

Selections.

MENSTRUATION AND ITS DERANGEMENTS. By ALFRED MEADOWS, M.D., F.R.C.P., etc., Physician to, and Lecturer on Midwifery and diseases of Women and Children at, St. Mary's Hospital.

Menorrhagia.—This term must be carefully distinguished from metrorrhagia, a task rendered easy by reason of the essential differences between the conditions which give rise to one and the other form of discharge. The former appears only at the regular periods at which the menstrual flow is wont to recur, whereas the latter is constantly present in patients who suffer from it. The causes tending to the production of menorrhagia are to be found in such excessive changes in the ovary as bring about a state of hyper-stimulation of the organ, and these changes may be initiated either through the nervous, or through the vascular system, or as a consequence of constitutional state. In the first case, excessive activity of the ovary results in an increase of function in the parts connected by nervous communication with it, and in these circumstances the blood supply will undergo variation commensurate with the changes set up. In such conditions of the general system as are observed in anæmia, on the other hand, fluid is easily transfused from the circulatory organs, and goes to increase the natural discharge in menorrhagic patients. In such cases constitutional treatment, by iron and other appropriate remedies, must be encouraged; but there will be also encountered varieties of this class of case, each demanding special treatment, the nature of which must be decided on the merits of each as it presents. In this connection it may be urged that no drugs are, strictly speaking, definable as emmenagogues. Some

substances which, under certain circumstances, act thus, may, at another time, and under varied conditions, ensure quite opposite effects, and therefore it should be regarded as an improper license of language to retain the term emmenagogues as fixed and invariable for any particular remedy.

Menorrhagia may be of different types. The *congestive* variety is encountered in florid women, and where it exists the uterus will be found thickened, deeply injected, and from it will flow a bluish sanguineous discharge following the introduction of a sound. This condition will, moreover, be attended by dragging pains in the back, aggravated at the periods of menstrual flow, and which may be set down as due to a passive uterine hyperæmia. The indications for treatment of such cases point to relieving the local congestion, for which purpose leeching is probably most suitable; and it may be repeated when required. General treatment is also called for, and particularly should the liver be attended to, since it is generally found to be at fault; likewise the digestive organs. The drugs to be looked to for benefit are such as ergot, nux, etc.

In ovarian menorrhagia the symptoms encountered present well-marked features to indicate the source whence they originate. There are no signs to indicate that the uterus is directly concerned in their production; pain is felt in the groins and down the thighs, and may also be experienced in the mammæ, all these special signs of ovarian implication being absent in the form of menorrhagia previously described. In it, however, the symptoms are aggravated at the menstrual period, and find an explanation in the physiological principles already enumerated. In these cases examination of the uterus reveals no abnormality connected with that viscus, but, on the contrary, pain and tenderness are always discoverable about the region of the ovaries, and at the same time possibly enlargement of the ovary itself. Also in these cases of true menorrhagia, the menstrual act occurs more frequently than it would under normal conditions of health, and this also serves to separate these cases from those of the uterine class, in which no such increased frequency is met with. The reasons for this peculiarity again are to be found in the structural arrangements and physiological influences at work in

the parts affected, and a due understanding of them will determine the nature of the treatment best to be adopted. The guide to this is in the pathology of the state, and would lead to the neglect of astringent remedies, which, from their mode of action, are improper and unscientific, since attention is to be devoted immediately to the ovaries, the seat of the morbid process that is to be attacked. The most powerful agent that can be employed in this connection is undoubtedly bromide of potassium. It exerts a direct and considerable action on the ovary, including atrophic changes in it, and thereby effects speedy diminution in the amount of discharge set up by over-excitement in its tissues. The bromide exerts specific influence over the nerves supplying the ovary, and hence the importance attaching to its use in all those instances where these nerves are in a condition of undue stimulation. Other treatment must of course be determined on the merits of each case; thus iron may be beneficially prescribed, and especially the application of anodynes locally in the form of pessaries. One of the most useful formulæ of this description is, Dr. Meadows explained, the following: codeia, 1 gr.; and atrophine, $\frac{1}{12}$ gr., in a pessary.

Menorrhagia consequent on organic changes in the uterus, may be considered as being amenable to treatment, except in those cases where such changes are due to presence of a malignant growth. The commonest form of such organic changes is so-called "sub-involution" of the uterus. This, the opposite condition to "involution," is readily understood when the sequelæ to delivery are considered. Following parturition the uterus is left in a condition of enormous hypertrophy, which, however, undergoes natural reduction, and in from three to four weeks in ordinary circumstances the organ resumes very nearly its natural condition. The process whereby this is effected is one of fatty degeneration, the uterine muscles, increase in which is that which produces the great enlargement of the organ, being thereby gradually diminished by resorption of the hypertrophied mass. The contraction of the muscular fibers themselves is a material operation, moreover, in bringing about the result; and anything which may interfere with due performance of such action will necessarily arrest the process of normal involution of the uterus, and set up

a state of sub-involution, thus favoring the menorrhagic condition; and it is a matter of observation that this consequence of its existence may be present with greater frequency after abortion than when delivery takes place at the full term. In such cases, too, metrorrhagia will not rarely be discovered. The occurrences which mark this state of affairs clearly show how the discharge may be maintained during their existence; they include descent of the uterus, a consequence of its increased weight acting on the weakened supporting structures, and the increased tissue substance at the same time constitutes a much-thickened wall, while the cavity of the organ may be even double its usual length. The presence of these conditions, taken together with the history of the case, enables a positive diagnosis to be immediately arrived at. Treatment is then comparatively simple. The indications are to relieve the atony, which is the most important depraved condition, and thus restore the structures to a state in which the arrested process may once more be pursued to the natural termination.

In those instances, however, where the history given is that of a chronically inflamed hypertrophied uterus, the treatment resorted to will be different, inasmuch as the operating causes are shown to be other than in the variety just considered. In order to meet and arrest menorrhagia due to sub-involution, attempts are directed to inducing tonicity and contraction in the uterus, for which purpose such remedies as ergot, cinnamon, nux, quinia, etc., will be found serviceable. Locally, the application of galvanism, if persisted in with a determination to overcome the menorrhagia, will sooner or later be attended with relief of the symptoms, and is well worthy of most careful trial.

Intra-uterine growths may be either malignant or non-malignant in character, and the symptoms of their presence may include both menorrhagia and metrorrhagia. The nature of the discharges, however, may undergo very considerable alteration in accordance with changes taking place in the uterus itself. It should be carefully remembered, also, that over-frequent ovolution will give rise to excessive secretion, the discharge of which may be mistaken for evidence of a menorrhagic flow. The phenomenon of periodicity, in all such cases, will serve to arouse suspicion

as to their real nature, and the further influences exerted over the discharge by, and through, the ovaries, will afford confirmatory proof concerning them.

When the fact that the uterus does contain a growth of some kind has been accurately established, then, if it be malignant in character, further decision respecting its special nature will be materially assisted by the signs its presence affords. Thus, the situation and character of the pain experienced by the patient will be a valuable means of diagnosis in cancer of the cervix, scirrhus. Absence of painful sensations is by no means of uncommon occurrence, whereas in that description of cancer which is found invading the fundus uteri agonizing pain is an all but invariable accompaniment, and it is never unattended by severe attacks of pain. The knowledge already gained of the nerve distribution of the uterus will render the explanation of this difference a simple matter, as also it will indicate why operation on the neck of the womb may be resorted to without the fear of unduly disturbing the patient.

There is also a distinct connection between the pain experienced and the amount of discharge from the organ. Thus the greater the degree of pain the smaller is the flow; and the more considerable the discharge the less excruciating is the pain, or the greater, in other words, the freedom from pain. This correlation is of immense value as a means of diagnosis in case of cancer uteri, and will often become a guide in the question of operative procedure. Whenever a copious discharge is met with in patients who suffer but little, and in whom the presence of a cancerous growth has been made out, then the conclusion is justified that the cervix is the part implicated, and never the fundus of the uterus. Again, as to the appearance of the discharge. This will be of a dirty fœtid nature, only in cases of malignant tumors, unless it be that it arises from a sloughing sore, or from pent-up secretions. In malignant cases it is always present.

The presence and nature of the growths under consideration need to be made out with care and certainty ere their treatment can be hopefully resorted to; and for this purpose several modes of investigating them must be pursued. Several aids to physical examination can be employed, and the chief may be noticed in

succession. The fingers of the operator are the most important of all these aids; by them the size, consistence, etc., of the cervix are at once determined; they unerringly ascertain the presence of growths on the walls they are in contact with, and as well, too, they will enable a determination to be arrived at concerning the preservation of the tumor, whether that is to be properly associated with one or other of the groups of cancerous growths, or is of non-malignant origin, as, *e. g.*, polypi, etc.

At this point Dr. Meadows proceeded to describe at some considerable length the numerous tumors to be found in the uterus under abnormal conditions, and the way in which they would be found productive of menorrhagia. From this subject he then passed to a consideration of the second most important aid to physical examination, the *uterine sound*, which he likened to an elongated finger, by the employment of which valuable information might be gained concerning the length and extent of the uterine cavity, the situation and nature of growths in its walls, etc., etc. He next enumerated the various kinds of tents, sponge, tangle, etc., also of service as aids to examination, which acted by dilating the canal of the cervix, and so admitting freer inspection of the interior of the womb.

In respect of *interstitial tumors* of the uterus, Dr. Meadows strongly inclined to the view that *enucleation* is the most appropriate treatment to adopt toward them; and he expressed his conviction that in the future it would be universally employed. In the majority of cases the tumor is, he explained, so free of the proper tissue of the organ as to admit of being safely everted, and he had been surprised sometimes to find how thin the wall could be which permitted this to be done with absolute safety.—*Medical Press and Circular.*

HEATON'S OPERATION FOR THE RADICAL CURE OF HERNIA.*

By GEORGE W. GAY, M.D., Surgeon to the Boston City Hospital.

The Heaton method of treating inguinal hernia for a radical

* Read before the surgical section of the Suffolk District Medical Society, November 19, 1881.

cure consists in moistening the fibrous tissues of the inguinal canal and rings with a preparation of white oak bark, and applying pressure by means of a compress and bandage to keep the canal closed, and prevent the descent of the hernia till the contracted tissues become strong enough to support the strain imposed upon them. The originator of the treatment claimed that by this method of "tendinous irritation," a permanent contraction of the fibrous structures was produced, which resulted in a lasting cure of the affection.

The fluid recommended for injection is composed of fourteen grains of the solid extract of white oak bark, thoroughly rubbed up with half an ounce of the fluid extract of the same drug by the aid of gentle heat. The mixture is thick and muddy, and requires thorough shaking before using.

The operation is performed as follows: The hernia having been reduced, and the sac also, if possible, an instrument resembling the hypodermic syringe, charged with the astringent, is thrust directly down through the skin into the external abdominal ring, and the point of the needle carried up the inguinal canal in front of the spermatic cord to the internal ring. The fluid is deposited slowly while withdrawing the instrument, the point of which is to be moved about in all directions, in order that the astringent may be distributed as evenly as possible throughout the canal. A compress and bandage are applied at once, and worn for a few weeks, when, in the successful cases, the rupture is cured, and requires no further support.

Twenty-four hours after the operation there is usually present some effusion and tenderness in the inguinal region at the seat of injection. The former may remain for an indefinite period; the latter commonly subsides in a few days, except in those unfortunate cases which terminate in suppuration. In some instances no thickening or effusion can be detected after the operation, while in other cases complete absorption of the exudation takes place after a time, and the parts return to their former condition. At the end of a fortnight, in the favorable cases, when the patient is allowed to leave the bed, the external ring will be found much reduced in size, and it is with difficulty that the finger can

be introduced into the canal, where, previous to the operation, it passed easily.

Should any of the fluid be allowed to escape into the areolar structure outside the canal, it is apt to produce a mass of induration in the loose tissues, which may persist for some time, but which, from its location, size, mobility and gradual absorption, can seldom serve in any degree to prevent the hernia from coming down. Furthermore, cellulitis and abscess may result from this cause. Suppuration occurred in two of our patients. The abscesses were deep-seated, apparently extending through the anterior wall of the inguinal canal. The resulting infiltration entirely disappeared in a few weeks after the abscesses closed, and in one case the hernia returned. These complications increase the suffering, prolong convalescence, and, in our opinion, add nothing to the success of the operation.

Dr. Davenport, who edited Dr. Heaton's book, and who was a careful and conscientious observer, always strongly insisted to the writer upon the importance of setting up only a very moderate local action by the injection; anything like severe inflammation was to be avoided if possible. He believed that white oak bark had a mild yet persistent astringent effect upon fibrous tissues, which was more lasting and less violent than that resulting from ordinary inflammation. Hence, it is the fibrous, and not the cellular structures which require the application of the astringent.

Where is the fluid deposited, in this operation?

This is an inquiry that has often been made, but to which, in the absence of any examination upon the cadaver, it is difficult to give a satisfactory answer. Theoretically, it should bathe the fibrous structures in contact with the neck of the sac. Practically, the surgeon, depending largely upon his anatomical knowledge of the parts, carries the needle up to the vicinity of the internal ring, and slowly empties the syringe during its withdrawal. Whether the sac is penetrated or not is probably largely a matter of luck, rather than of skill, for in cases of old hernia it would seem hardly practicable to guide a needle between the sac and walls of the canal without penetrating one or the other. In some cases the needle moves about in the canal with great free-

dom, giving one the impression that it has entered the cavity of the peritoneum; yet in twenty-seven operations I have never seen anything like peritonitis. With few exceptions, there has been only a moderate local disturbance, which did not require treatment, and which subsided in a few days. Although the pain of the operation is not severe, yet in children an anæsthetic is required to prevent the struggling and straining from forcing out the contents of the rupture before the bandage is applied; timid and nervous people also need it to enable them to keep still. Opiates are not usually called for during the after-treatment.

Below will be found a brief report of *all* the cases operated upon by me, both in hospital and private practice, with the exception of two, which have been under treatment but a few weeks. The results are stated as fully as possible, and no patient is reported *cured* who has not remained well for at least a year after discarding all support to the rupture.

Case I.—A waiter, aged twenty-four years, entered the hospital suffering from an inguinal hernia of moderate size on the left side; a truss had been worn. September 9, 1877, the patient was etherized, rupture reduced, and ten drops of the Heaton mixture injected into the inguinal canal. A compress and bandage were applied, and the patient remained in bed two weeks. He was discharged, wearing a bandage, at the end of five weeks. The external ring had been reduced to one-half its former size by the operation, and the rupture had not returned.

Case II.—A sailor, thirty-four years of age, with a reducible inguinal rupture of seven months' duration, was operated on at the same time, and in the same manner as the previous case. He was discharged in four weeks, wearing a truss; the ring was contracted somewhat, but not sufficiently to control the hernia.

Case III.—A harness-maker, aged forty-five, subject to asthma and bronchitis, had a right inguinal hernia of some years' duration; the ring was large, and rupture uncontrolled by a truss. Operation June 10, 1878. Although the size of the ring was somewhat reduced, the intestine came down during an attack of severe coughing, and he was discharged not relieved.

Case IV.—A policeman had an omental rupture of two years' duration, which extended half-way to the bottom of the scrotum,

and could not be controlled by a truss. The operation by injection was performed twice in as many months, with the result of reducing the ring to the size of a pipe stem, but a strand of the omentum still came down, though it could easily be kept up by a truss. Being very anxious to obtain a radical cure, he afterward submitted to an operation for the removal of the protruding omentum, but with only a partial success. He is now wearing a truss.

Case V.—A boy, a year and a half old, with a double inguinal hernia, was operated upon in 1878, in the out-patient department of the hospital. The after-treatment was neglected, as the mother failed to bring him back to have the bandage readjusted. The operation did no good, and the child now wears a truss.

Case VI.—James, twenty-one months old, right inguinal hernia; injected with three drops of the oak bark; wore bandage only a week; remained well at the end of fourteen months.

Case VII.—Michael, two and a half years of age, had a right inguinal hernia which had lasted six months; the ring was large, and two operations were performed. Three years later the rupture came down, only after great straining; he had worn no support.* It seems fair to consider him much relieved by the injection.

Case VIII.—A house painter, aged twenty-four, subject to convulsions, was injected for an inguinal rupture. The fits returned three days after the operation, when he jumped out of bed, pulled off his bandage, and the rupture returned. No benefit was received from the operation.

Case IX.—Daniel, aged twelve, a thin, spare boy, had a scrotal hernia with large rings, and loose pillars. Was injected twice within two months. He remains well at the present time, and has not worn a support for nearly two years.

Case X.—A boy, four years of age, was operated upon for an omental hernia running into the scrotum, with little if any relief.

Case XI.—John, six years old; inguinal rupture, which had come down only a few times; it was reduced under ether about a week before the operation by injection. The ring was small, and hence peculiarly adapted to this operation. The little fellow

* I have lately repeated the operation upon this child.

was running about in a week, and has had no return of his rupture. It is now nearly two years since the operation. This patient would very probably have recovered by wearing a well-fitting truss.

Case XII.—For a year Miss ——, aged thirty-eight years, had suffered a good deal from an omental hernia, which came down into the right labium in spite of any truss she could apply. The operation was performed as in the male, and she remained in bed about a month. The resulting inflammation in this, as in all the cases narrated thus far, was very moderate, never threatening suppuration. She wore an abdominal supporter for several weeks. Fourteen months after the operation she remained well.

Case XIII.—A man, fifty-eight years of age, entered the hospital, suffering from the early symptoms of strangulation of an inguinal hernia. It was reduced under ether, and the operation for a radical cure performed some weeks later. When he left the hospital, at the end of three weeks, the hernia had not returned, and the little finger could not be passed into the external ring. As the rupture was intestinal, the operation promises to be successful.

Case XIV.—A baby, ten months old, was brought to me with double inguinal hernia, which trusses did not keep in place. Both were operated upon for the first time over a year ago; as the child has since had measles and whooping-cough, without bringing down the left rupture, we may safely call that one cured. Suppuration followed the injection upon the right side, and the operation has been repeated twice without success. The rings are large, the inguinal canal is short, and thus far no truss has been found to control the hernia. The operation is to be repeated after the child has fully recovered from whooping-cough.

Case XV.—Mr. F., aged twenty-three, suffered a good deal from inguinal herniæ, which could not be controlled by trusses. The rings were large, pillars thin, and abdomen flat. Both ruptures were operated upon without ether a year ago. Large effusion followed the injection, resulting in an abscess on each side, which was a long time in closing. Neither hernia has returned;

the patient wears a double truss, and has been greatly relieved by the operation.

RECAPITULATION.

Number of patients, fifteen; cured, four; relieved, eight; not relieved, three. Number of ruptures, eighteen; cured, five; relieved, eight; not relieved, five. Number of operations, twenty-three.

With two exceptions, the above cases seemed to be favorable ones for the operation. That it was not more successful may very likely be due, in part, to the lack of skill and experience in the operator; in part to the imperfect after-treatment, especially in several instances, occurring in the out-patient department of the hospital; and finally to the fact that a second operation could not be obtained in several cases, in which not quite sufficient contraction resulted from the first.

While I do not feel justified, from my limited experience, extending over only four years, in expressing a decided opinion as to the real value of the oak bark treatment of hernia, yet my impression is, that in the inguinal variety of the affection it is often a good method, and is worthy of further trial and study at the hands of competent surgeons. It would seem peculiarly adapted to cases with small rings, and to cases occurring in children, when Nature herself is making a constant effort to correct the deformity, and requires but little assistance to enable her to accomplish the result.

I know nothing of the merits of the operation in other kinds of hernia; but in the one under consideration I can but conclude that it is safe; it is not very painful; it is not very difficult to perform; it does little harm, even if it does no good; it will cure a certain number, and will relieve others.—*Boston Med. and Surg. Journal.*

NERVE STRETCHING IN TETANUS—SUCCESSFUL. By W. I. WHEELER, M.D., T.C.D. F.R.C.S.I., Surgeon and Lecturer on Clinical and Operative Surgery to the City of Dublin Hospital; Member of Council Royal College of Surgeons.

The operation of nerve stretching has, of late years, been often

practiced, and has been a subject of much interest to, and investigation for, most practical surgeons, although the case I am about to record, viz., nerve stretching in acute traumatic tetanus, scarcely as yet comes within the present literature of the operation, only one case, as far as I know, being fully and well recorded of nerve extension in tetanus. I feel that a limited epitome of one or two of the earlier accounts will render this communication more interesting. Truly, many cases recorded in times past bear on the operation of stretching nerves, although a different explanation is given, to what now, they would seem to require; this is well exampled by a case of secondary amputation performed by Mr. Langstaff, for a neuralgic stump, in which he states he drew out the nerves before dividing them, and that the neuralgia was cured. He performed this operation in order that the nerves might be free from cicatricial tissue, but it is reasonable to assume that the favorable result was due to the *nerve stretching*.

Amongst the earliest operations of this kind we find the following remarkable case, published by Professor Nausbaum (*Deutsche Zeit. f. Chirurgie*) which I will briefly record:

A soldier, æt. 23, received a blow with the butt end of a rifle, on the nape of the neck, and another on the left elbow. At the former place an abscess formed and was opened and duly healed up again. He afterward suffered from contraction of the left pectoral region, the whole left upper and fore-arm, and hand of the same side. This contraction was a spasm, which became more violent the more attempts were made to oppose it; besides, there extended over all the dorsal aspect of the fore-arm an anæsthesia, which increased to such a degree that deep incisions, tenotomies, etc., could be practiced without any pain to the patient. The spasms varied in intensity, and were so violent that for hours the finger tips were driven into the palm of the hand; the great pectoral muscle was always as hard as stone. Numerous were the remedies applied—iodine, mercury, belladonna, and the constant and interrupted galvanic currents, etc., etc., without affording the slightest relief. Professor Nausbaum operated after this manner:

The patient being under chloroform, an incision about three inches long was made over the site of the ulnar nerve, which

was lifted, gently extended, and then replaced. The wound was cleansed, and closed by suture. A second incision was made in the axilla over the artery. The nerves, which closely surround the vessel, cutaneous as well as muscular, were drawn out one by one, the median, radial and ulnar being recognized to a certainty by the twitching of the muscles of the finger, which they respectively supplied, and after being subjected to the same treatment as the ulnar nerve, were replaced and the wound brought together; lastly, an incision was made over the left clavicle, such as would suit the ligation of the sub-clavian, the platysma having been divided, the four lower curved nerves were isolated, traction was exercised upon each, and each was followed with the tip of the right forefinger to its point of exit from the vertebral column, here each was pushed upward and downward, and right and left. A good tug at the nerve in a direction, although it were to be pulled away from the spinal cord, completed the operation. The four upper curved nerves were not touched, as there had been no indication that there was any lesion of the phrenic nerve at its origin. The operation was successful beyond expectation, the spasms did not return, the forearm and fingers could be flexed and extended at will, and the skin of the arm, which before the operation was so devoid of sensation that puncture and the application of hot sealing wax were painless, had regained sensation to such an extent that the patient, even when blindfolded, could localize the slightest touch. The man made a good recovery, although he had of necessity to run the gauntlet of pyæmia, nearly always present, then rife in Nausbaum's hospital.

Close after Nausbaum, we have cases recorded by Billroth and the late Mr. Callender. The observations of the latter gentleman, well worth perusal, may be found in the Clinical Societies "transactions;" were it within the province of this communication, I could myself relate cases with satisfactory results from stretching the supra-orbital, facial, spinal accessory, and external poplitial nerve, and quote published statements, that substantial and advantageous results have followed the stretching of the ischiatic nerve in Duchenne's paralysis. That relief may be obtained in such cases is quite tenable, but the pathology of the disease negatives the assertion that more than that can be gained;

the notes of the following case under my care were chiefly taken by the house surgeon:

Teresa M., æt. 8, a strong, healthy child, was admitted to the City of Dublin Hospital on the 10th of October, 1881, suffering from what she stated to be a sore finger. Eight days previous to admission a stone fell on the middle finger of her right hand, bruising it severely; the finger had been dressed and placed on a splint by the medical man who saw the case, but, owing to the neglect of the parents, the dressing had not been changed for six days previous to admission. On examination the end of the finger was found to have been destroyed by gangrene, and fell off with the foul dressings, leaving the end of a fractured phalanx (the second) protruding; this fell away at the joint next day. The patient did not complain of any pain in the hand, but did of pain in the back, which was stated to be caused by a fall off a table. When the question of making a neater stump was under consideration, it was noticed that the patient lay in a peculiarly stiff way in bed; operative procedure was postponed, commencing tetanus was diagnosed, and was followed by the train of usual symptoms. The muscles of the back and abdomen became rigid, the sterno-cleido-mastoid and trapesic muscles were also in a state of rigidity, the risus sardonicus was well marked, and strong tetanic spasms backward (opisthotonos) contorted the child's body; the spasms came about every two hours. The treatment was locally, opiate stupes applied over the wounded finger, enveloping the hand as far as the wrist, and ice to the spine and head. Internally, bromide of potassium, belladonna, and cannabis indica were administered; chloral hydrate was given by the rectum to produce sleep; the nourishment was chicken broth, milk, and beef-tea. The room was carpeted, and a screen placed round her bed. There being no improvement from the above treatment, but, on the contrary, the patient getting worse, and the spasms increasing in intensity, on Sunday morning, the 15th October, I determined to stretch the median nerve in the forearm. The child being put under the influence of chloroform (my colleagues, Dr. H. Benson and Mr. Butcher, were present), I made an incision about two and a half inches long in the forearm and quickly caught the median, closely applied to the posterior

surface of the flexor digitorum sublimis, which appeared somewhat red. I stretched the nerve between two fixed points, and also pulled it firmly downward toward the wrist joint in its long axis; while under the chloroform the tetanic spasms stopped. The wound was brought together by means of strips of American rubber plaster, and quickly healed. No deleterious carbolic spray was used, but there was minute attention paid to surgical cleanliness before bringing the edges together. For two hours after the operation the spasms increased a little in frequency, but gradually became less frequent. Never were they so intense from the time of the operation, and from this time the recti muscles of the abdomen became relaxed. The temperature was always normal or sub-normal,* and the pulse ranged from 60 to 70 per minute, save on two occasions when it was 110 and 90 per minute. The further history of the case was a gradual progress toward recovery; the last recorded twitch, for it could not be called a spasm, was on the 20th of October. The patient is now quite well and she has returned to the country. In her photograph (here produced) can be seen, on close examination, the line of incision. On testing the sensation in her right hand with the æsthesiometer, three days before leaving the hospital, it was found unimpaired, as also motion.

As before stated, the only well recorded case of nerve stretching in tetanus that I can find is that reported by Dr. Paul Vogt, who cut down on the brachial plexus, and pulled it in a case of traumatic tetanus occurring fifteen days after an accident which inflicted wounds on the palmar and dorsal aspects of the same hand. He states that there were attacks of the most powerful opisthotonos, that there was no pain in the forearm or arm, not even tenderness, and that the wounds were healthy and granulating. Slight spasms occurred in his case on only two occasions after the operation, but there was some stiffness of the jaws remaining. In discussing the treatment of *traumatic* tetanus, it can be done under two heads, viz., by operative measures, and medicinal measures. The results of treatment are so unsatisfactory as to justify any reasonable line of action that has a chance

* The highest temperature recorded in tetanus is that by Wunderlich. Even the thermometer stood at 112 Faht., and the temperature continued to rise for an hour after the cessation of all signs of life.

of success. Under medicinal agents we could not well be at a loss, as almost every medicine in the Pharmacopœia has, some time or other, been prescribed for this affection. On the contrary, operative measures are much more limited. I may name amputation, actual cautery, division of nerve trunks, and nerve stretching; of these I selected the latter, believing it to give the best chance to my patient. That the pulling and pulling forcibly of a nerve is not followed by any untoward results is manifest not only from the cases I have quoted, but from those recorded by Billroth and others, where large nerves have been exposed and roughly handled, neither was their motor power nor their nutrition impaired; but when we come to consider how the stretching of a nerve relieves pain, how it stops tetanic spasms arising from central irritation, with our limited physiological knowledge of the spinal cord it is difficult to offer an explanation.

Now Flaubeit and Le Bret have shown that inflammation of the spinal cord may follow as a consequence of irritation of the brachial plexus, and Brown-Séquard has confirmed this, and illustrated the extension of irritation through a nerve trunk to the spinal cord; developing symptoms through the extension of the mischief in the nerve centers, to parts removed from those first involved, hence, the necessity for the recognition and discerning between a peripheral and a central irritation. Nausbaum has made a speculative statement, that in neuralgia the stretching is of service by altering the relations of the nerve fibers and improving their nutrition, but this would not account for the cessation of spasms due to tetanus. It would seem that as neither sensation or motion, even in violent nerve stretching, is impaired, that it must be a temporary numbing of the nerve, by which numbing there is a cessation of the power of the nerve fibers to transmit abnormal impressions, and thus the centers have time to resume their normal condition and control. *Apropos* of this, Dr. Brown-Séquard has proved that if a nerve is exposed and frequently washed with ether it will be unable to transmit any irritation. But, it may be asked, will not the division of the nerve break the chain of these abnormal impressions? I think experience teaches us the contrary, for if there is a neuritis present, as I believe there was in my case, the limits of the affection

are unknown, and in the cases recorded by Drs. Sands and Seguin, in which portions were cut out from the brachial plexus, the nerves of which were found matted together, the patient was only relieved, as the neuritis probably extended further on the central side. Knowing these facts, I was prepared to stretch the brachial plexus of nerves, were I not convinced as I was by the relaxing of the abdominal recti, and afterward by the lessening of the spasms, both in frequency and intensity, that the amount of stretching I practiced would be sufficient; but, in thinking over the case, it has occurred to me that had I stretched the brachial plexus, like Dr. Paul Vogt, the spasms might have ceased almost immediately. I deem this case one of much interest, and being anxious to know if there had been any cases of nerve stretching for tetanus in the sister Island that I could quote here to-night, I inquired of Mr. Bryant, who informs me he cannot give me reference to any case of nerve stretching for tetanus in London.

RABIES—A POSSIBLE CAUSE AND A PROBABLE PREVENTIVE.
By L. L. DORR, M.D., San Francisco.

It is probably owing to the great obscurity that surrounds the etiology, pathology and treatment of rabies, that it is exciting so much study. Taking these divisions of the subject up inversely, it may be remarked that experience in the treatment of this terrible disease has thus far furnished no favorable results. In this respect there has been less accomplished than in the case of any disease known to both ancient and modern times. In the few cases chronicled as cured there have invariably been good grounds to question the diagnosis; for in a perhaps purely nervous disease like this, there is plenty of room for exercising the imagination both of the patient and of the physician. It is safe to say that in no case of undoubted rabies has death failed to result speedily, and that there is no known cure.

Of the pathology, we have none that is recognized by the general profession. Whether it is primarily a disease of the blood, which sooner or later affects the nervous system, or whether the

effects are exerted directly on the nervous system, is not known. Both systems seem to be the theater of the disease in man. No contusion or rupture of the skin can occur but there is of course more or less of an impression on the nerves; but it seems to be necessary that the poisonous saliva shall reach the absorbents to produce the effects, and then it is a comparatively few who are bitten by a really rabid animal who take the disease. Injury of the peripheral nerves when there is no possibility of the wound being poisoned, may produce tetanus, a disease much resembling rabies. A comparison of these two diseases shows that the history is similar, the symptoms being markedly alike in many respects, and the results of treatment in most instances not much different, for Dr. O'Beirne, of Dublin, witnessed two hundred cases of tetanus without a single recovery. It may be that rabies is a form of tetanus, but that the special poison has a particular affinity for the nerves governing the muscles connected with the acts of deglutition and respiration. There are poisons that produce analogous, peculiar and special effects. Dr. A. Flint, Jr., says: "Woorara, a poison, has the remarkable property of paralyzing the motor nerves, but leaving the nerves of sensation intact." This drug has been used in the treatment of both tetanus and rabies for these reasons, but with no marked results. Cantharis has a special effect on the mucous membranes of most persons, and it may kill if the dose is sufficiently large. There are many drugs, of vegetable and mineral origin, that have special effects on certain organs.

The symptoms of rabies are well-known, and generally unmistakable to an unprejudiced mind; but until we more fully understand the causes, we cannot expect to prevent this malady. The same may be said of the pathology; for until we understand the pathology, especially during its incubation, we cannot expect to treat the complaint intelligently or successfully. But little has been said of the etiology in all that has been published of late on this subject, and when the pathology and treatment have reached a non-progressive stage, it is time—not to abandon them—but to direct the attention of thinking people to the cause, that steps may be taken for prevention; and there is something to be said on this point. We are not satisfied to sit down and say, "What

can not be cured must be endured;" for what can not be cured in medicine must be prevented, says modern science. In recent medicine, it is possible that the prevention of disease has done more to prolong human life than therapeutics, whether based on pathology or not. It may be that such will be the case with rabies; and that in the absence of any cure, and with certain death in prospect, the grain of prevention may be of great value. As instances where progress has been made by adopting this line of defense, it is only necessary to mention the management to-day of yellow fever, cholera, small-pox, etc. For these infectio-contagious diseases there are no cures, but we see how much can be accomplished by prevention; which, in fact, is almost total annihilation. How can these arguments be applied to rabies?

The Possible Cause.—In a study of the natural history of the dog, we find that he is an animal existing in nearly every country of the world, both in the wild and in the domesticated condition. He is indigenous to nearly all lands. The theory that the dog is a descendant from the wolf is not tenable.

Rabies has been known among dogs as far back as history speaks of them. It is also found that it has prevailed most in the most thickly-settled countries, and those having the most intimate and constant communication with other nations; and from those peoples it can be traced just in proportion as they made discoveries and conquests of other lands; for wherever civilized man has gone he has taken dogs, and in those lands rabies has then appeared, and not until then.

In the Mauritius Islands it was not known until 1821, when it appeared soon after a dog arrived there on an English ship from Bengal. It is not mentioned whether this dog was allowed intercourse with the native dogs, thereby giving opportunity for generating or spreading the disease by contagion, but it is presumed the greatest liberty existed.

In Labrador, Liberia, Australia, Van Diemen's Land and New Zealand, places in but comparatively slight communication with the rest of the world, rabies is seldom if ever heard of. In relation to Greenland, heretofore reckoned in the list, Professor Agnew says, in his recent "Surgery:" "In 1863 it prevailed to such an extent in Northern Greenland as to destroy all the

dogs in certain localities." It must be remembered that communication with Greenland is getting more and more frequent, and that the Esquimau dog is said to be fast crossing with the wolf. Erichsen says: "Rabies is not known in Central Africa in any animals."

As regards China and Japan, countries notably exclusive of both men and animals from foreign lands, and where they have mostly one breed of dogs, rabies is seldom heard of. Authorities differ, however, in this respect. Dr. H. W. Boone, surgeon in charge of St. John's College, Shanghae, China, writing under date of June 28, 1881, says: "The ordinary Chinese dog is large, sort of half-wolf, like Indian or Esquimau dogs, but they have small Pekin pugs and small Canton dogs. Chinese dogs occasionally cross with European dogs, but only at the few open ports. The pure Chinese dogs have hydrophobia, and did so in early days, before foreign contact was common. Japan the same." Dr. D. B. Simmons, for many years a resident in Yokohama, Japan, writing under date of March 10, 1881, says: "I have never seen an unmistakable case of rabies in a Japanese. I saw one case in a foreign child who was bitten by a foreign dog, a Newfoundland. The dogs here are large, wolf-like beasts, having their origin, no doubt, in China."

Without doubt, dogs have been taken to all of these places, and perhaps allowed to live there for years, but they were probably dogs of a pure and original breed, and were not permitted to accompany or cohabit with the native dogs. And here hangs the point of my argument as regards the cause of rabies—that is, that a dog of a pure and original breed is incapable of generating rabies, and that it never appears in any land until such dogs breed in-and-in with dogs of other countries, producing the mixed or mongrel dog. All dogs receive and give the contagion, but only the mongrel can *generate* it. Such seems to be the proper deduction to make from the history of rabies, and such is the conclusion that observers of dogs and of this disease are fast approaching. Charles Hamilton Smith says that "the Newfoundland dog is an original breed, and true hydrophobia does not attack them in their native land." The same author, in speaking of Arctic dogs, says: "Arctic dogs in their native regions are

not liable to canine madness." He also says: "Of all domestic dogs, the greyhound is the least liable to hydrophobia." It is also true that the greyhound is the least apt to breed with other dogs; they are peaceable, keep mainly by themselves, and are no doubt of a pure and original breed. Erichsen says: "Among dogs, rabies is the most common in those of mongrel breed, seldom affecting those of pure blood." John W. Hill, R.C.V.S., in speaking of the causes, says: "I am very much inclined to think breeding in-and-in encourages its development." Dr. Verity, in the Manchester *Courier* of 1876, says: "I have always had a strong opinion that breeding in-and-in tends to produce hydrophobia in the dog." There are many instances in human beings where crossing the race tends to produce men inferior in intellectual force and physical bearing, with a strong tendency to disease. If we want a perfect specimen of the intellectual and physical make of any race, we find it among those of pure and unadulterated blood. The crossing of nations of the same race produces, undoubtedly, a superior class of men, but the crossing of different races only produces inferiors, natural criminals and idiots. There are a few exceptions, but they only make the rule more apparent and forcible. The Caucasian and Indian crossing we all know the result of—weak, criminal, and sickly offspring. There are no King Philips or Sitting Bulls who are half-breeds. The results of the crossing of the negro and white man are numerous among us, and generally they are objects of pity, and die early. The few with us of the cross of Chinese and Caucasian are the despised of both nations. The Mexicans are largely a cross between the Spaniard and the native Indian, and are a weak, degenerating, dying people, far lower in intelligence and physique than the Spaniard of Spain or the historical Aztec. To return to the brute creation, it is only necessary to say that the breed is not improved by crossing the common horse with the Arabian or Shetland. Cattle are not improved by crossing with the buffalo. These instances all seem to admonish us to keep the breeds, whether of human beings or animals, pure and of the original race. It may be that rabies is the result of the violation of this seeming law of nature; and if so, the prevention would be easy —that is, to allow none but dogs of a pure and original breed to

live. How easy this would be to try in a land like England, where laws are made to be enforced, and it would not be hard to determine which were of a pure breed. It is possible, to my belief, that if dogs of different breed were prevented from crossing, or their progeny disposed of, rabies might be prevented. In the absence of a cure, the trial of this measure may be deemed advisable.

The question naturally arises, Which are the dogs of a pure breed? We have to regret that nothing is *positively* known on this point, history being incomplete. Recent authorities, such as Charles H. Smith, Thomas Bell, and Youatt, speak in no decided words on this point, using the indefinite terms probably, evidently, etc.; but the following-named are with little doubt directly descended from the wild dog: the shepherd dog, the mastiff, the greyhound, the hound, the spaniel, the Newfoundland, the Esquimau, the terrier and the cur. The shepherd has been considered the primitive dog. He is no doubt the original dog of Western Asia and Egypt. The mastiff may be indigenous to England or the higher lands of Asia and Africa. The greyhound is very ancient, having been known three thousand years ago, when it differed in no important particular from that of the present day. The British Museum contains a group of greyhound puppies in stone, from the ruins of the villa of Antonius. The greyhound was an inmate of Anglo-Saxon kennels in the time of King Elfric. The hound and spaniel are natives of Spain. The Newfoundland is indigenous to that island, and was not known in Europe until imported from there. The Esquimau dog is a native of the more northern latitudes, and is more like the wolf than any other species, yet is reckoned as the native dog. The majority of those seen at the present time may be a cross with the wolf. The terrier is considered indigenous to Great Britain. Curs are the most numerous, and are the native dogs of many countries; but, having no well-marked characteristics, they have received no definite name, and are often confounded with the mongrel dogs. There may be others, but these are the principal ones.

The Probable Prevention.—It has been very generally admitted that climate makes no difference with the appearance of the

disease. Professor G. Canettoli, in *Lo Sperimentale* for June, 1875, says, in writing of rabies: "This is a disease of all climates; the extremes have the smallest number." Mr. Hill says: "The influence of climate, season, or sex would appear to have little bearing on the subject." This conclusion is from a European standpoint.

The Pacific coast of America presents some peculiar features as regards this disease. We have in this city, and in a portion of the State, a peculiar climate, which cannot be compared with that of any other portion of the world. But we have also in this large State, and on the Pacific coast, thickly-settled towns and cities where the extremes of heat and cold are well marked, and can be brought into comparison with those of places in the Eastern States and Europe; yet, from Behring's Strait to Cape Horn, not a well authenticated case of rabies was ever known. Dr. Logan, recently United States Minister to Chili, in a little work published in Chicago, called "Physics of the Infectious Diseases," says: "Of the remarkable disease called hydrophobia, the author feels himself justified in saying that it has never been known upon the whole coast." Dr. F. C. Valentine, of Guatemala, writes, under a recent date, and after eleven years' residence in Central America: "I have not encountered one authenticated case of rabies during my residence here." Dr. G. Chismore, of San Francisco, a gentleman fond of dogs, and who lived several years in Alaska, says, under date of June 11, 1881: "I never saw or heard of a case of rabies among Alaskan dogs." Dr. F. W. Hatch, permanent Secretary of the State Board of Health of California, in a note dated February 20, 1879, says: "There are no cases of, or deaths from, hydrophobia on the records of the State Board of Health. Personally I know of no cases of the disease in the State." The records of the Health Office in San Francisco furnish no evidence that there has ever been a death from rabies in the city. Is it truthfully stated, then, that climate has no influence over this disease?

It seems to be well proven that rabies prevails more or less in nearly all portions of the world that have been long in communication with the older nations, but that it does not prevail on

the American Pacific coast in any animals, brute or human, while at the same time there is every kind of climate from the north frigid, through the temperate and tropic, to temperate and frigid again. Whatever the future may bring, the past gives no record or knowledge of the existence of rabies. Why we are so wonderfully and fortunately favored cannot, perhaps, be positively made out.

It is reasonable to suppose that among the many human beings and animals who are bitten every year by really rabid dogs in the Eastern States and in Europe, some one or more, considering the possibly long period of incubation, must have reached the Pacific coast; yet not one case has been developed, while dogs are numerous and of great variety, from the pure-blooded greyhound to the scurvy mongrel.

Dr. Verity, in an article on this subject which appeared in the Manchester *Courier* of 1876, approaches what may be considered some explanation. He says: "Certain peculiar changes in the system, possibly due to atmospherical influences, act in producing it." If this be true, may not other atmospherical influences act to restrain or annihilate the poison? We have a recognized condition of the atmosphere on the coast, called electrical; and all are aware of the wonderful effects of artificially generated electricity when used in the treatment of nervous and other diseases. A test of the power of the climate of the American Pacific coast to prevent the development of rabies can easily be made, with strong probability of proving a blessing to hundreds of human beings who have no other hope. The period of incubation is so long in many cases, that several dogs known to be badly bitten by a dog known to be suffering with rabies could be sent here under guard, and kept behind prison bars and under observation until the extreme limit was passed. Or a more practicable plan might be to have a number of the many persons who are annually bitten by rabid dogs in the Eastern States and Europe come to this coast, and remain here until the extreme limit of the possibilities was passed, selecting any place from Cape Horn to Behring's Strait—preferably, however, California, where we have a varied climate and all kinds of dogs, and are in

close communication with all parts of the world. The patient having a knowledge of these facts, and the support of hope of escape, it might be a power to prevent an attack ; and, if he were attacked, the disease might be so modified by the climate as to render it susceptible of cure.

DISSEMINATED TUBERCULOSIS NOT ORIGINATING IN A PRIMARY SOURCE OF INFECTION WITHIN THE BODY. By C. CREIGHTON, M.D.

The author had examined the organ and parts from a number of tuberculous cases, from nine months to fifty years of age, and concluded that there had been no primary seat or focus of disease in the body, with respect to which the tuberculosis might be regarded as a secondary infection. On the other hand, the tubercles on the serous membranes, in the lymphatic glands, in the lungs and in the viscera, were to be taken as all coördinate with respect to the initial infection, which must have been considered to have been a virus introduced into the body from without.

The best analogy for tubercles disseminated through the body was the analogy of primary, secondary, and tertiary syphilis, in which the syphilitic formations, in however various parts they might be situated, and at whatever intervals of time they might appear, were all alike due to a virus introduced from without. The author's views were in accordance with those of Klebs (Virchow's *Archiv.*, vol. xliv, 1868). They were at variance with the opinion of Schüppel (*Lymphdrüsen-Tuberculose*, 1871), who considered that tuberculosis might originate as a primary new formation in the lymphatic glands, and in the serous and synovial membranes. They were equally at variance with the opinion of Rindfleisch, who, while he admitted a primary, secondary, and tertiary tuberculosis, explained that succession as being a subordinate one on the analogy of tumor-infection, which was contrasted with the analogy of the coördinate syphilitic infection, or of any other such infection due to a virus introduced into the body from without.

Professor Virchow (Berlin) criticised the statement of Mr. Treves, that tubercle was not neoplasm, but an inflammatory product. He (Dr. Virchow) did not understand the difference. A neoplasm was a new formation, which had arrived at a certain degree of independency. The formation of new bone on the surface of the old bone was first inflammatory, but, if it grew and formed an exostosis or osteoma, then it was neoplasm. In his opinion, neoplasm was only a conventional term, having no connection with the cause, the origin, or the history of the product. The relations between tubercle and inflammation were manifold. There were forms very common in serous membranes, where the development was at first, and during a long time, simply inflammatory; and it was only after the repetition of certain actions that the development of tubercle in the newly-formed tissues was seen. In some cases, there was a series of capillary excrescences of only fibrous tissues, and in other cases such processes became enlarged at the end, and the formation of tubercle commenced. In other cases, tubercle was developed without any sign of inflammation; that was to say, if the signification of inflammation in the old traditional sense were maintained. Mr. Treves had said that giant-cells were lymph-coagula. When he (Professor Virchow) was a student, all such cells were called "mother-cells." At a later period, he introduced this name of "giant-cells," in order to make a distinction between somewhat large multi-nuclear, with two, three, or four nuclei, and the cells having the characteristic and specific form found in a certain number of cases. It was important to distinguish between multi-nuclear cells and the peculiar giant-cell. In cancer, there would frequently be found large cells with six, eight, or ten nuclei; but the specific contents of the cell were not of the finely granular substance which gave the peculiar appearance to the giant-cell, and it was possible at first sight to distinguish the two forms. This penular form of cell—not the old "mother-cell"—was first distinguished by M. Robin in the marrow of bones, and called by him *myéloplaxè*. The English surgeons applied this term to the history of tumors and neoplasms, and recognized it as characterizing a form of myeloid growth. This was a very penular form of tumor, but it also existed where there was no marrow. Some cases of epulis

were composed nearly altogether of those cells, the majority of which proceeded from the surfaces of the maxillary bones. He investigated these penular myeloid cells, and had found them in the placenta and in the peritoneum. M. Robin called them *myéloplaxès*, because he believed that they were not cells. They had a membrane, but, to see it, it was necessary to examine very fresh preparations, such as those just removed in surgical operations. This could be done by applying concentrated fluids, first strong, and afterwards diluted; by which means it became possible to remove the cell-membrane from the surface. He did not know that any coagula could be treated by fluids of different concentration in such a manner that a perfect membrane could be removed. The cells were developed by a regular gradation from simple cells, showing that it must be organic formation, and not coagulum. More developed forms were also characterized by a difference in the granular contents, and which sometimes had a brownish hue. The common multi-nuclear cell had not this peculiar development. He held that giant-cellswere a very peculiar form of regular cell-formation; not common to one single process. He had observed giant-cells in ordinary lymphatic glands long before he and others saw them in scrofulous or tuberculous glands. With regard to Dr. Creighton's communication, he believed that in many cases no caseous or other process existed before the tubercles were formed. He had always maintained that primary eruptions of tubercles might exist without any previous tubercular or caseous mass. He had also seen secondary tubercular deposit at the periphery of cancerous tumors; and hence he had become very cautious in concluding, from the observation of tubercles in the periphery of a tumor, that the origin was also tubercular. He originally believed that the majority of caseous masses found in the suprarenal capsules were tubercular, but possibly that many of those originated in scrofulous inflammation; and that only at a later period tubercle appeared. The secondary eruption might be produced by any noxious substance, or, he would say with Dr. Creighton, by any virus; but this need not come from without. It might be produced in the body itself by any morbid process. He thought that by a multitude of processes a substance could be produced that could infect the

neighboring tissue, also the whole body, and produce tubercular eruption. Professor Virchow then referred to the occurrence of bovine tubercle in man, contended for by Dr. Creighton, and handed a copy of the report of the experiments conducted at the Veterinary School in Berlin. It was a matter by no means settled at present. He had never seen the flesh or milk of animals suffering from *perlsucht* cause tubercle in animals fed with it; infection had taken place only by inoculating the tubercular matter itself. He considered that the calcification of the *perlsucht* nodules was a distinguishing characteristic.

M. Béchamp (Lille) directed the attention to the part taken by micro-organisms in the formation of pulmonary tubercle. He thought that the molecular granulations break down, destroy the cells, and take up carbonate and phosphate of lime. They appear under the form of small spheres, or often in that of a figure eight. When placed in a suitable medium, they fructify and give rise to a mycelium and bacteria, this development being accompanied by the disengagement of hydrogen and carbolic acid and the formation of butyric acid.—*The Cincinnati Lancet and Clinic.*

THE OPIUM, CHLORAL and HASHISCH HABITS.—Under the title of "Drugs That Enslave," Dr. H. H. Kane, of New York, has produced a small volume (Presley Blakiston, Philadelphia), presenting a very graphic picture of the manner in which the habits of taking opium or morphia, hydrate of chloral, and Indian hemp, are acquired, and containing an accurate description of the injurious effects of these habits upon the system, and the treatment to be employed in breaking them up.

In ministering completely to his natural wants and cravings, man may be said to have several objects in view. His first care is to provide the materials capable of rebuilding the tissues that are constantly being destroyed in the exercise of the different functions of the body; of these materials, bread, meat and water may be taken as examples. Next, he endeavors to lessen mental uneasiness and anxiety, employing for this purpose various fermented liquors, all of which depend upon the same ingredient—

alcohol—for their intoxicating properties. Finally he strives to multiply and exalt his intellectual and animal pleasures by the use of narcotics, such as tobacco, opium or hemp. It is impossible to find a tribe of people, however savage, that has not discovered in some way, that, for the want of a better word, can be termed instinctive, the art of preparing alcoholic drinks, and that does not use them to produce intoxication, with its attendant pleasures and consequent miseries. Equally universal and instinctive is the use of narcotics. With the exception of tobacco, which is consumed by nearly the whole world, the narcotics resorted to vary greatly in their nature, and, unlike the fermented liquors, owe their soothing effects to very different active principles. The rule is for each nation to use a narcotic of native growth; for instance, in Turkey and China opium is used, in India hashisch, in the Eastern Archipelago betel-nut and betel-pepper, in Peru and Bolivia coca, and so on. While the pleasureable sensations obtained from alcohol and the narcotics explain in part their very extended use, another explanation is to be found in the well-known fact that, when taken in moderation, the consumer is enabled to accomplish his work upon a less amount of food than would otherwise be required; this property is due to their power of diminishing the tissue changes incident to all labor, and the consequent necessity and demand for reparative food.

The effects of food, alcohol and the narcotics depend solely upon the way in which they are employed, whether temporately or intemporately. So natural is it to satisfy the appetite for food, that we are apt to ignore the fact that over-indulgence is as certainly followed by disease as in the abuse of wine or opium. On the other hand, we forget that, of the multitudes who use alcohol and narcotics, very many are not only uninjured, but even benefitted, by their temporate use. In illustration, it is only necessary to refer to the testimony relating to the effects of opium upon the Chinese. On this point, an observer states: "Although the habit of smoking opium is universal among rich and poor, yet they are a powerful, muscular and athletic people, and the lower orders more intelligent and far superior in mental acquirements to those of corresponding rank in our own country

(England);" another: "that the effects of the abuse of the drug do not come frequently under observation." There can be no question, however, about the great tendency to the abuse of both alcohol and narcotics. The sensations produced are so delightful that, having been once experienced, many individuals are unable to resist the temptation to reproduce them. Each indulgence, beside lessening the power of resistance, is followed by a period of depression directly demanding a repetition of the dose, which must also be constantly increased in amount to bring about the desired result. Consequently, what is at first a matter of choice soon becomes a necessity, and the habit of abuse, with its dire consequences, is established.

To limit attention to the narcotics, it is probable that the increase in the habitual over-use of the more powerful substances of this class in our own country does not depend on a simple craving for pleasureable sensations, but, as Dr. Kane suggests, on a desire to be relieved from some long-standing and perhaps constant disagreeable sensation. The increased mental strain attending the struggle for wealth and position, the diminished physical activity, the hurry and turmoil of our lives, together with the influences of climate, have gradually given us bodies in which the nervous element largely predominates.

The distressing manifestations of increased nervousness, particularly pain, are most promptly overcome by narcotics. One of these drugs, usually opium, may be ordered by a physician, the intention being to resort to some more radical treatment as soon as the urgent symptoms have disappeared; the sufferer, though, having once found relief, insists upon a further use of the drug—may even at times feign illness to procure it—and in the end obtains some for himself, and in secret drifts into its habitual misuse. In proof of this statement, it will be found that the particular narcotic and the manner of consumption among *habituès* corresponds exactly with the medical practice of the period in which they live. When opium in substance was prescribed by physicians, people ate opium; when the alkaloid morphia became fashionable, the habit of eating morphia arose, and since the discovery of the hypodermic syringe by Dr. Alexander Wood, of Edinburgh, and its introduction to this country in

1856, by Prof. Fordyce Barker, the habit of injecting morphia subcutaneously has been developed. The chloral habit has demanded attention for the past few years only, the date of the discovery of the drug being comparatively recent; and the hashisch habit is very infrequently met with in this country, simply on account of hemp being so little used as a medicine here.

Where the responsibility for the formation of these habits rests, is a difficult question to decide. A great share of the blame must, of course, be attached to the individual who allows himself to give way to a morbid appetite; but the physician who, knowing the weakness of human nature, places a narcotic at the disposal of a patient, to be used as he deems fit, does a foolish, if not criminal act; still more the druggist who, as far too frequently happens, sells opium or chloral at the simple request of a customer, and without the authority of a physician's prescription.

The opium habit claims a much larger number of victims, is more easily formed, and much more injurious to health than the chloral habit. In proportion to the quantity consumed, the functions of the mind and body are rapidly or slowly undermined, until the *habituè* becomes a mere wreck of his former self; business is neglected; social ties are sundered, and the sole object in his life is the gratification of a passion that he loathes, yet can not overcome. The habit may be broken either by a sudden or a gradual withdrawal of the drug. On account of the suffering occasioned by the first method, and the risk of the production of dangerous symptoms that may continue for many days, the author of the work before us recommends the system of gradual withdrawal, from four to ten days being the period allowed to elapse between the first reduction of the dose and the total suspension. The patients are more successfully treated when removed from their homes and separated from friends who may be induced to secretly supply the drug; baths, electricity and certain medicines are useful as adjuncts, and a very important step in the permanent cure is the removal of the disease that primarily led to the use of opium.

The continued use of hydrate of chloral is not so apt to generate a morbid craving for it as a similar use of either opium or

morphia, and the habit, once formed, is usually readily abandoned, although in some instances, like the dipsomaniac's desire for alcohol, the chloral craving, after remaining latent for a long time, unexpectedly returns; under these circumstances, there is considerable difficulty in breaking the habit permanently. Sometimes, particularly when the quantity consumed each day is small, chloral produces no noticeable alteration in the general health. In other cases, the activity of the brain and the whole nervous system is diminished, the functions of digestion, respiration and circulation are interfered with, various eruptions appear upon the skin, and a condition resembling ordinary blood-poisoning may be produced. Unless there is great debility, it is perfectly safe to break this habit by an abrupt withdrawal of the drug; the patient is then soon restored to health by the employment of baths, electricity, and a stimulant and tonic plan of treatment.

Only one instance of the hashisch habit has come under the observation of Dr. Kane, and it is probable that the abuse of this drug is very rare in America.

Dr. Kane's book is adapted more for the professional than the lay reader; still, it contains many points of general interest, and cannot fail to aid in checking an evil that is but too evidently on the increase.—*The American.*

NEW YORK AND PHILADELPHIA CLINICAL LECTURES (adapted from the *Denver Tribune* "Primer").—Whom do I see? You see a lecturer describing a case to his class. Do you see the case or the class? Of course you do not; they are both in the lecturer's mind.—*Record.*

Items.

OBITUARY.—Died, at his residence near Philadelphia, on the 31st of October, 1881, William Furness Jenks, M.D., aged thirty-nine years.

The death of Dr. Jenks finished a life which a few years ago was full of promise. Educated at Harvard, he received his medical degree from the University of Pennsylvania in 1866, and after a term of service as resident physician in the Philadelphia Hospital, he studied obstetrics and gynæcology in the special schools of Berlin, Vienna, London and Edinburgh. In 1870 he began the practice of his profession in Philadelphia, and lost no time in finding in dispensary service the opportunity of acquiring a practical knowledge of the sciences which he had so carefully studied, and for three years gave a course of practical obstetrics, illustrated by operations on the cadaver. For only a few years, however, was he able to continue his work. In the autumn of 1874, failing health compelled him to pass the winter in Florida. On his return, he made an effort to resume work, but was soon forced to give up, and again seek in a foreign climate the health refused him in his own. From this time his professional labors were over, for he saw that the only hope of prolonging his life was in the entire abandonment of all work. For a few years his search for health was partially successful, and he lived in comparative comfort until last October, when, after a short confinement in bed, he quietly passed away.

Breaking down almost at the beginning of his professional life, Dr. Jenks left but little behind him by which he could be judged, and the full measure of our loss properly estimated. His exhaustive review of Schrœder (*American Journal Med. Sci-*

ences, Oct., 1872), and the paper on "Sarcomatous Growths of the Uterus," (*Amer. Supplement to the Obs. Journ. of G. B. and I., Oct. and Nov.* 1873), bear, however, sufficient evidence of the extent of his knowledge, and of the close analytical character of his mind. A pupil of Sir James Y. Simpson, he regarded the obstetric forceps as extractors, rather than compressors, and after persistent efforts, succeeded in introducing the Simpson Forceps into Philadelphia obstetric practice. A skillful pathologist, he, at the time of his first illness, was preparing a course of lectures on uterine and ovarian pathology for the College of Physicians. Had he been able to complete this course, it would have been a very valuable contribution to this branch of medical science. It, however, was not to be, and when he died, almost nothing remained to his friends, save the recollection of the brilliancy of his genius, his patient industry, and the sparkling geniality of his manner.—*The Medical News and Abstract, December*, 1881.

THE SIXTEEN COMMANDMENTS OF THE PARIS ACADEMY OF MEDICINE.—Translated by Dr. D. C. Holiday, for the *New Orleans Med. and Surg. Journal.*

The Academy of Medicine has condensed into the following sixteen propositions the most important hygienic rules for the care and management of infants. We reproduce them here, with the sincere hope that all mothers and nurses will commit them to memory and observe them as faithfully as the ten commandments of holy writ:

I. During the *first year* the only suitable nourishment for an infant is its own mother's milk, or that of a healthy wet-nurse. Suckling should be repeated every *two* hours—*less* frequently at night.

II. When it is impossible to give breast-milk, either from the mother or a suitable nurse, cow's or goat's milk given tepid, reduced at first one-half by the addition of water slightly sweetened, and after a few weeks one-fourth only, is the next best substitute.

III. In giving milk to an infant always use glass or earthenware vessels, not metallic ones, and always observe the most scrupulous cleanliness in their management, rinsing whenever used. Always avoid the use of teats of cloth or sponge, so frequently used to appease hunger or quiet crying.

IV. Avoid carefully all those nostrums and compounds so liberally advertised as superior to natural food.

V. Never forget that artificial nourishment, whether by *nursing-bottle* or *spoon* (without the breast), increases to an alarming degree the chances of producing sickness and death.

VI. It is always dangerous to give an infant, especially during the first two months of its life, solid food of any kind—such as bread, cakes, meats, vegetables or fruit.

VII. Only after the *seventh* month, and when the mother's milk is not sufficient to nourish the child, should *broths* be allowed. After the first year is ended, then it is appropriate to give light broths or paps, made with milk and bread, dried flour, rice, and the farinaceous articles, to prepare for weaning. A child ought not to be weaned until it has cut its first twelve or thirteen *teeth*, and then only when in perfect health.

VIII. An infant should be washed and dressed every morning before being nursed or fed. In bathing a child temper the water to the weather, carefully cleanse the body, and especially the genital organs, which require great cleanliness and care; and the head should be carefully freed from all scabs and crusts which may form. Where the belly-band is used it should be kept on for at least one month.

IX. An infant's clothing should always be so arranged as to leave the limbs freedom of motion, and not to compress any portion of the body.

X. An infant's clothing should be studiously adapted to the weather, avoiding at all times exposure to the injurious effects of sudden changes in the temperature without proper covering; but nurseries and sleeping apartments should invariably be well ventilated.

XI. An infant should not be taken into the open air before the fifteenth day after birth, and then only in mild, fair weather.

XII. It is objectionable to have an infant sleep in the same bed either with its mother or nurse.

XIII. No mother should be in too great a hurry to have a child walk; let it crawl and accustom itself to rising on its feet by climbing on articles of furniture, or assisted by the arms of a careful attendant. Great care should be taken in the too early use of baby-wagons, etc.

XIV. No trifling ailments in infants, such as colics, frequent vomiting, diarrhœa, coughs, etc., if persistent, should be neglected—a physician's advice should be at once obtained.

XV. In cases of suspected pregnancy, either of mother or nurse, the child should be weaned at once.

XVI. A child ought to be vaccinated after the fifth month, or earlier should small-pox be prevalent.

QUACK ADVERTISEMENTS.—The most despicable of all literary frauds and liars are those employés of nostrum mongers who assume the character of physicians and write down the profession for the purpose of writing up quackery. Of course this is done anonymously, for no respectable physician could make such a fool of himself. It is a part of the quack-medicine machinery. The inventor of a preparation to be put on the market as a new and valuable discovery, employs some smart scribbler who is otherwise a miserable hack, to puff it. For this purpose no fiction is too gross and mendacious. Assuming the character of a respectable physician of great experience, the hired penman throws himself soul and body into the service of his master and stops at no falsehood which his skill in that line may suggest. Nor has he any difficulty to get a hearing before the public. He knows that newspapers in general have their price, and that "religious" periodicals are not above the captivating influence of money. We have just observed in a weekly religious journal published in the East, a long article of the kind referred to, in which the writer represents himself as a "reporter" giving the experience of an old and well-known doctor, who was cured of some disease (not of lying) by a certain quack "kidney cure," when his professional

brethren had failed to relieve him. Of course the "Doctor" was manufactured in the brain of the reporter, and yet the story will gain credence with a large per cent. of readers, particularly as it appears in a religious paper, and not in the usual form of an advertisement.

There is greatly needed a sense of personal responsibility on the part of journalists in regard to the advertisements which they publish. At present this is entirely wanting. There is no one to stand between the conductors of a journal and the public. Not only are editors and managers irresponsible in this respect, but their direct endorsement of the most palpable falsehoods is often purchasable with money. The agent of the unprincipled nostrum-monger or abortionist goes to the newspaper manager with a proposition substantially as follows: "I want you to publish for me this budget of lies—forged certificates of cure, disguised abortion notices, and so forth. I want it inserted, not as an advertisement, but under another head, so that people will think the editors have written or indorsed it. I want to buy, not only the use of your columns, but, for the time being, that of the names, character and souls of all the editors and others concerned with your paper. What is your charge?" The representative of the press answers: "Our people don't much like to father such a job as that. One of them is a preacher, you know, and they are nearly all strictly religious. We shall have to charge you just double price for putting that stuff in as you want it. Our men can't sell their consciences for nothing." And so the bargain is ended.

We do not pretend to say that this is the literal method of transacting the business, nor that every journalist is guilty of it. But the picture is not much overdrawn, and the practice is injurious and disgraceful and ought to be abandoned.—*Pacific Medical and Surgical Journal.*

E. PASTEUR'S EXPERIMENTS ON CHARBON.—M. Pasteur has now an opportunity of practically testing the truth of his theory as to the protection of animals from charbon by their inocula-

tion with the artificially cultivated virus of that disease. On the 5th ultimo, the farm of a veterinary surgeon at Pouilly-le-Fort, and sixty sheep were placed at M. Pasteur's disposal. Ten of these sheep were left untouched, in order that they might later on serve for comparison. Of the remaining fifty, twenty-five were marked with a hole in their ears, and were inoculated, the first time on the 5th of May, and the second on the 17th. On May 31, none of the inoculated sheep had lost fat, or spirits, or appetite. On May 31, the fifty sheep were taken, without distinction, and inoculated with the strongest virus. M. Pasteur predicted that, on the 2d instant, the twenty-five sheep not inoculated would be dead, and that the inoculated animals would show no symptoms of sickness; and accordingly, on that day, a number of spectators, including the President of the Agricultural Society of Melun, the Prefect of the Department, and the Director of Agricultural Matters at the Ministry of Agriculture and Commerce, assembled to witness the result. The prophecy of M. Pasteur was exactly fulfilled. At two o'clock twenty-three of the sheep which had not been inoculated were dead. At three o'clock the twenty-fourth died, and the twenty-fifth an hour later. The twenty-five inoculated animals were quite sound, and in perfect health. Only one of them was feverish; and the fever, which was caused by the animal having designedly been inoculated with too strong a dose of the virus, speedily disappeared. The twenty-five carcases have been buried in a fixed spot; and, on the infected grass which will grow over it, experiments are to be made with inoculated and non-inoculated sheep. M. Pasteur's discoveries in this direction are being amply corroborated by English experience, and, if the matter be properly taken up, the agricultural interest will have one less difficulty to contend against, since it ought to be practicable to protect herds against charbon much in the same way that human beings can protect themselves against small-pox by vaccination.

INTESTINAL RESECTION.—Professor Czerny communicates (*Berl. Klin. Woch.*, No. 45, 1880), three cases of intestinal resection which he has performed. In two cases, the gangreneous

coil of intestine in a strangulated hernia was resected; and, in the third case, a malignant tumor of the colon was removed. In one of the first two cases, the patient recovered perfectly without fever or reaction of any sort; in the second, the already pulseless patient died during operation in a fit of fæcal vomiting. The third case was the most remarkable. A female, 47 years old, with a tumor in the abdomen, diagnosed as intestinal cancer, had vomiting and diarrhœa. On operation, there was found a large tumor of the tranverse colon, firmly attached to a coil of the sigmoid flexure. Part of the sigmoid flexure was first resected, the ends being brought together with thirty-three sutures; then a large piece of the colon was removed, and the ends united by twenty-six sutures. Lastly, a wedge-shaped piece of the meso-colon was removed, also necessitating ligatures. A drainage tube was inserted, and the wound in the abdominal wall closed by means of four deep and eight superficial sutures. The patient recovered, and was living half a year after the operation, although, from the infiltration of the mesenteric glands, a recurrence is inevitable. Dr. Czerny proceeds as follows: The intestine being compressed above and below, the diseased part is removed along with the corresponding wedge of the mesentery. The ends are now disinfected, and a double row of carbolized silk sutures applied. Those in the first row include about a twelfth of an inch of the serous and muscular layers of each end of the intestine, and are about a twelfth of an inch apart. A second row of sutures, about a fifth of an inch apart, are applied over and partly including the first. The intestine is then returned into the abdomen, and antiseptic dressing applied.

QUEBRACHO.—Dr. Stewart (*Canada Medical Journal*), says: First introduced by Penzoldt, it has been found to be a decided palliative in many cases of dyspnœa. It is especially valuable in the dyspnœa of emphysema and chronic bronchitis. In dyspnea depending upon valvular insufficiency its value is questionable. Penzoldt has lately experimented with an alkaloid which is obtained from this bark. It is called *aspidospermin*, and occurs

in small, white, prismatic crystals. Ten milligrams of a one-per-cent. solution of this alkaloid caused complete motor paralysis in frogs, with marked reduction of both pulse and respiration. Penzoldt administered it to eight patients suffering from dyspnœa due to various causes. In all there was considerable relief; in two this was very marked. According to Penzoldt, it has an undoubted influence over dyspnœa, especially that attending emphysema, but is inferior to the quebracho itself. Dr. Picot, of Carlsruhe, used a tincture of the quebracho bark while doing some mountain climbing, with the result that he could climb with much greater ease and comfort. He has also used it in patients suffering from dyspnœa, and found it act well. In the same number of the *Berl. Klin. Woch.* Berthold recommends it highly. Flint has used it with success also.—*Louisville Medical News.*

CONSTIPATION IN INFANTS.—The following are some of the remedies found useful by Dr. D. H. Cullimore (*London Lancet*): 1. A pellet of butter and brown sugar or treacle every morning fasting, or a little raspberry jam. 2. The morning insertion into the rectum of a conical piece of white curd soap about two inches and a half long. It must be first dipped in warm water, held *in situ* for five minutes, and withdrawn. 3. Daily friction over the body, from the right iliac region along the course of the gut, with a little salad oil. In India I have used cocoanut oil advantageously. Cod-liver oil is very useful when its smell is not objected to. *En passant*, I may say that I have at present under my care a girl of fifteen who for a couple of months has suffered from obstinate constipation. She has lately had typhoid. Both mild and strong purgatives were ineffectual, and it has now yielded to cod-liver oil friction. Assiduous friction, without any unguent, is often equally useful. Patience, however, is necessary. A teaspoonful of fluid magnesia in the food is a good plan. Tomato jelly is sometimes used in India with benefit. Whatever plan may be adopted, it is well to supplement it with the internal administration of half a drop of tincture of nux vomica three times a day; a quarter of a drop is sometimes sufficient. Minute doses of sulphur also answer well.—*Louisville Medical News.*

SOCIETY MEETINGS.

Chicago Medical Society—Mondays, Feb. 6 and 20.
Chicago Pathological Society—Monday, Feb. 20.
Biological Society—Wednesday, Feb. 4.

CLINICS.

MONDAY.

Eye and Ear Infirmary—1.15 p. m., Otological, by Prof. Jones; 2.15 p. m., Ophthalmological, by Prof. Hotz.
Mercy Hospital—2 p. m., Medical, Profs. Hollister and Quine.
Woman's Medical College—2 p. m., Dermatological and Venereal, by Prof. Maynard; 3 p. m., Diseases of the Chest, Prof. Ingals.

TUESDAY.

Rush Medical College—3 p. m., Dermatological and Venereal, by Prof. Hyde.
Cook County Hospital—2 to 4 p. m., Medical and Surgical Clinics.
Mercy Hospital—2 p. m., Surgical Clinic, by Prof. Andrews.

WEDNESDAY.

Chicago Medical College—2 p. m., Eye and Ear, by Prof. Jones.
Rush Medical College—2 p. m., Medical, by Dr. Bridge; 3 p. m., Ophthalmological and Otological, by Prof. Holmes; 3:30 to 4:30 p. m., Diseases of the Chest, by Dr. E. Fletcher Ingals.
Eye and Ear Infirmary—2.30 p. m., Dr. E. J. Gardiner.

THURSDAY.

Chicago Medical College—2 p. m., Gynæcological, Prof. Jenks.
Rush Medical College—2 p. m., Diseases of Children, by Dr. Knox; 3 p. m., Diseases of the Nervous System, by Prof. Lyman.
Eye and Ear Infirmary—2 p. m., Ophthalmological, by Dr. Hotz.
Woman's Medical College—3 p. m., Surgical, by Prof. Owens.

FRIDAY.

Cook County Hospital—2 to 4 p. m., Medical and Surgical Clinics.
Mercy Hospital—2 p. m., Medical, by Prof. Davis.

SATURDAY.

Rush Medical College—2 p. m., Surgical, by Prof. Gunn; 3 p. m., Orthopœdic, by Prof. Owens.
Mercy Hospital—2 p. m., Surgical Clinic, by Prof. Andrews.
Chicago Medical College—3 p. m., Neurological, Prof. Jewell.
Woman's Medical College—11 a. m., Ophthalmological, by Prof. Montgomery; 2 p. m., Gynæcological, by Prof. Fitch.
Daily Clinics, from 2 to 4 p. m., at the Central Free Dispensary, and at the South Side Dispensary.